AN EASY

INTRODUCTION

TO THE

ARTS AND SCIENCES:

BEING

A Short, but Comprehenſive Syſtem

OF

USEFUL and POLITE LEARNING.

DIVIDED INTO

LESSONS.

Illuſtrated with CUTS, and adapted to the Uſe of Schools and Academies.

BY R. TURNER, JUN. LL.D.

LATE OF MAGDALEN-HALL, OXFORD:

Author of an Eaſy Introduction to Geography, &c.

Ingenuas didiciſſe fideliter artes
Emollit mores.——

Aſperitatis et invidiæ corrector et iræ.

To have learned the liberal arts thoroughly, ſoftens the manners, and operates as an excellent corrector of ill-nature, envy, and anger.

OVID. HOR.

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———Καὶ ΒΡΕΦΟΣ διδάσκεται
Λέγειν, ἀκούειν θ', ὧν μάθησιν ἴσχει
Ἃ δ' ἂν μάθητις, ταῦτα σώζεσθαι φιλεῖ
Πρὸς γῆρας· ὥστε ΠΑΙΔΑΣ ΕΥ ΠΑΙΔΕΥΕΤΕ.

EURIPIDES.

———E'en the INFANT learns
To form new Notions, and to utter them;
And what he learns, he faithfully retains
When he is old:—INSTRUCT THEN YOUR CHILDREN WELL.

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AN

AN

ABRIDGMENT

OF THE

ARTS AND SCIENCES.

LESSON I.

OF RELIGION.

" The fear of the Lord is the beginning of wiſdom: a
" good underſtanding have all they that keep his
" commandments." DAVID.

" Be particular not to neglect religion in the educa-
" tion of your children. In vain will you endeavour
" to conduct them by any other path. If *they are*
" *dear to you,* if you *expect from them credit and*
" *comfort,* from religion muſt be derived their hap-
" pineſs and your own." FATHER GERDIL.

RELIGION! ſoother of all our keeneſt ſorrows, ſource and refiner of all our real joys! ſhed thy heavenly influence on our ſouls; direct, animate, and crown all

our purſuits; pervade and conſecrate all our thoughts, words, and actions; or we can never anſwer the deſign of God in our creation; we fall ſhort of true happineſs in this life, and we ſink to the compleateſt wretchedneſs in that which is to come *.

Q. What is religion?

A. A worſhip rendered to the Divine Being after that manner we *conceive* to be moſt agreeable to his will, that ſo we may procure his favour and bleſſing, and avoid his anger and diſpleaſure; and is either *true* or *falſe*, *pure* or *corrupted*.

Q. How do you divide true religion?

A. True religion admits of three diviſions; 1ſt, the religion of nature; 2d, the religion of the Jews; 3d, the religion of Chriſtians.

Q. What is natural religion?

A. As far as our notions of a divine Being proceed from the ideas we have from the light of nature and reaſon.—Man has been defined a *religious* animal, and by this

* Dr. Aſh.

one

one epithet, perhaps, beſt diſtinguiſhed from the brute.

Q. How is the religion of the Jews founded?

A. On the Old Teſtament, and the law given by Moſes to the tribes of Iſrael.

Q. Who is the Author of the Chriſtian religion?

A. The Son of God, who left the boſom of the Father, and all his glories there, to dwell in fleſh and blood: he became the child of a poor maid in Galilee;—when grown up, he appeared as a young carpenter, and ſweat and laboured in the trade of his father Joſeph.—He travelled on foot to preach his divine goſpel, when he might have been borne on the wings of angels;—he was content with mean lodgings in the tents of poor fiſhermen in Galilee, the moſt contemptible country of the Jews;—and ſometimes the Lord of glory had not where to lay his head.—An obſcure life on earth veiled the Majeſty of the King of Heaven.—Such was the amazing humility of the Son of God, the bleſſed Author of Chriſti-

anity; ſuch the example left us by the meek and lowly Jeſus.

Q. How many falſe or ſpurious religions are there?

A. Two;—Paganiſm and Mahometaniſm.

Q. What is Paganiſm?

A. The religion of the Pagans, or Heathen nations;—and, becauſe they repreſent the deity under ſeveral forms or idols, it is called idolatry, or image worſhip.

Q. From whom has Mahometaniſm its riſe?

A. From the impoſtor Mahomed, who appeared in the ſeventh century;—his whole doctrine is a ridiculous jumble of Heatheniſm, Judaiſm, and Chriſtian hereſies, and is contained in the rhapſody of the Alcoran.

Q. Of what advantage is an exact obſervance of religion to a ſtate?

A. Very great; it inſpires honeſty in every one, juſtice in princes, fidelity in ſubjects, integrity in Magiſtrates, good faith in commerce, and union in marriage.

LESSON

LESSON II.

OF THE ARTS AND SCIENCES.

" The *taking a taſte* of *every ſort* of knowledge is ne-
" ceſſary to form the mind, and is the only way to
" give the underſtanding its due improvement to the
" full extent of its capacity." LOCKE.

Queſt. WHAT is ſcience?

Anſ. A certain and evident knowledge of ſome thing.

Q. What is an art?

A. Art is the way of doing a thing ſurely, readily, and gracefully.

Q. How are the arts divided?

A. Thoſe that belong to ſciences, as philoſophy, rhetoric, grammar, mathematics, aſtronomy, painting, muſic, and ſculpture, all the others are called mechanical.

Q. Why are they called the liberal arts?

A. Becauſe the ancients allowed them to be ſtudied only by the *Liberi* or free perſons.

Q. How many ſciences are there?

 A. Eight

A. Eight principal ones;—1ſt, Theology; 2d, Philoſophy; 3d, Juriſprudence; 4th, Medicine; 5th, Rhetoric; 6th, Grammar; 7th, Poetry; and the 8th, Mathematics.

I. *Of Theology.*

Q. What is theology?

A. That ſcience which contemplates the nature of God, and divine things.

Q. How is the word theology derived?

A. From the Greek words, ſignifying the *word of God.*

Q. How may the exiſtence of God be proved?

A. What is neceſſary to be known of God is manifeſt in the works of the creation. The heavens declare the glory of God, and the rich furniture thereof. The ſun, the moon, and ſtars, ſhew themſelves to be his handy-work. There is no nation on the face of the whole earth where their voice is not heard, for it is gone through

through all the earth, and their word to the end of the world.

Q. To whom was the title of theologician firſt given?

A. To ST. JOHN, who has by that name been diſtinguiſhed from the other three Evangeliſts, becauſe they only wrote the Hiſtory of the Life of Jeſus Chriſt, but St. John wrote his goſpel to eſtabliſh his eternal divinity (as the word of God), and his incarnation.

II. *Philoſophy.*

Q. What is philoſophy?

A. The ſtudy of nature and morality, and founded upon reaſon.

Q. What is the etymology of the word philoſophy?

A. It is compounded of the two Greek words φιλια *love*, and σοφια *wiſdom* or *knowledge*.

Q. Into how many parts is it divided?

A. Four; logic, morality, phyſics, metaphyſics.

I. *Logic.*

Q. What is logic?

A. The art of uſing reaſon well in our enquiries after truth, and the communications of it to others.

Q. In what does this art conſiſt?

A. In the reflections made by men upon the four principal faculties of their mind, perception, judgment, reaſoning, diſpoſition.

II. *Morality.*

Q. In what are we inſtructed by morality?

A. It gives us rules for the behaviour, manners, and conduct of man, whether it be in public or private life, and is properly called *Ethics*, from the Greek word ἦθος, and *morality*, from the Latin word *mos*, plural

ral *mores*, both ſignifying manners or behaviour.

III. *Phyſics.*

Q. From what is the word phyſics derived?

A. From the Greek word φυσις *nature*, or φυσικη natural.

Q. Of what does it treat?

A. Of all natural things;—it teaches us to explain all the phœnomena of the heavens and earth.—And,

1. *Of Meteors.*

Q. What is a meteor?

A. A meteor is whatever is engendered in the air which ſurrounds us, and which appears to be beyond the moon. This word ſignifies bodies raiſed above the earth we inhabit.

Q. What is the air?

A. A tranſparent, inviſible, and impalpable liquid matter, encompaſſing on all parts the terreſtrial globe. The air, by experiments, has been found to be 840 times lighter than water.

This air is compoſed of a high, middle, and lower region.

The air of the higher region is more ſubtile and more cold than that of the middle; and that of the middle ſtill finer than the lower.

Q. What is the compoſition of meteors?

A. Vapours and exhalations.

Vapours are particles of water that mingle with the air.

Exhalations are particles of all the different terreſtrial bodies that riſe into the air, ſulphurs, ſalts, bitumens, and other bodies of different natures, more or leſs combuſtible, ſolid or heavy.

LESSON

LESSON III.

2. *The Wind.*

Q. WHAT is the wind?

A. Nothing elſe but the air put violently into motion; and the more ſwift this motion is, and the more denſe the air, the greater will be the wind's force; if the ſwiftneſs encreaſes to a high degree, it is then called a ſtorm.

Q. How are the winds divided?

A. Into four principal ones, the NORTH, SOUTH, EAST, and WEST, which receive their name from the four principal quarters of the world.

The Frigid Zone is the parent of the North Wind, which is conſequently the coldeſt.

The South Wind is the warmeſt, particularly in the ſummer, becauſe it comes from

the Torrid Zone, over countries hotter than *ours*.

The Eaſt Wind is the dryeſt, becauſe it comes acroſs the vaſt continent of Aſia, but little watered by rivers or ſeas.

The Weſt Wind is generally damp, and often blows us rain; becauſe, as it croſſes the great Atlantic ocean, it attracts a great quantity of vapours.

When theſe impetuous winds happen to meet, the greateſt inconveniences follow. The ſulphureous exhalations from the ſouth, torrent of nitre from the north, and watery vapours from every ſide, become, indiſcriminately, blended together in one confuſed maſs.—From hence proceed tempeſts, thunder, rain, hail, and whirlwinds.

The air is often ſeen to move in two contrary currents, and this almoſt ever previous to thunder. The clouds in ſuch a caſe are ſeen to move one way, while the weather-cock points another.

Red clouds appearing in the morning preſage winds.

3. *Clouds and Miſts*

Q. How are miſts formed?

A. Miſts are thoſe collections of vapours which chiefly riſe from fenny moiſt places, which become more viſible as the light of the day decreaſeth.

Q. What are clouds?

A. Clouds are nothing elſe but a dark collection of miſty vapours, ſuſpended aloft in the air, and ſoaring on the wings of the wind.

Q. Pray how high do you ſuppoſe the clouds to fly?

A. From about a quarter of a mile to a mile. It is common for perſons, by climbing very high mountains, to get above the clouds, and ſee them ſwim beneath them, cleaving againſt the mountains they are on.

Q. Whence the various figures and colours of the clouds?

A. The wonderful variety in the colours of the clouds, is owing to their particular ſituation

ſituation to the ſun, and the different reflections of his light: the various figure of the clouds, reſults from their looſe and voluble texture, revolving into any form according to the different force of the winds.

4. *Rain.*

Q. What is rain?

A. Nothing but thick clouds condenſed by the cold, which, by their own weight, fall upon the earth in ſmall quantities, called drops of water.

Thoſe ſmall clouds, ſometimes ſeen very high heaped one upon the other, preſage rain very ſoon.

When the horizon, at the riſing or ſetting of the ſun, appears pale and yellowiſh, it is a ſign of the air being full of vapours, and promiſes bad weather.

But when it is of a light red at thoſe times, there are but few vapours in the air, and fine weather may be expected.

If

If the cloud that melts is greatly rarified, and its particles, in falling, meet an air moderately warm, theſe drops will be ſo ſmall, that they will not compoſe rain, but rime only.

The Dew.

Q. From what is the dew produced?

A. From a quantity of particles of water extremely ſubtile, that float about in a calm and ſerene air in form of vapours, which, being condenſed by the coldneſs of the night, loſe by degrees their agitation, and many uniting together, fall in the morning in ſmall inviſible particles like an extremely fine and delicate rain, which continues but a ſhort time, and is ſeen in drops of water like pearls upon leaves and herbs.

Snow.

Q. How is ſnow formed.

A. Snow

A. Snow is produced thus: in winter the regions of the air are intenſely cold, and the clouds finding this great cold on every ſide, quickly paſs from that ſtate of condenſation that might reduce them to rain, into that which is able to reduce them to ice; ſo that in winter, as ſoon as the clouds begin to change into very fine drops of water, each of theſe ſmall particles freeze, and touching each other, form flakes of ſnow.

Q. Why are theſe flakes ſo light, and the ſnow ſo white?

A. The ſmall intervals that the flakes leave between them, like ſo many pores, filled with a ſubtile air, are the cauſe of their lightneſs.

The ſnow is white, becauſe the ſmall particles of ice that compoſe thoſe flakes being hard, ſolid, tranſparent, and differently arranged, they reflect to us the light from all parts.

LESSON

LESSON IV.

Of the Hail.

HAIL is formed when the parts of the cloud, beginning to fall, meet in their deſcent a very cold air, which freezes them, and theſe ſmall bits of ice are very near the figure and ſize the drops of water would have been had they fallen.

Thunder and Lightening.

Q. What is thunder?

A. A noiſe heard in the air, moſt frequently in the ſummer. Thunder is the moſt wonderful of all meteors.

Q. What is the cauſe of this meteor?

A. Thunder is cauſed by the nitrous or ſulphureous particles of the clouds, taking fire through the fierceneſs of their motion, occaſioned by ſtrong winds, and burſting with

with a tremendous noiſe, which is preceded by a flaſh of fire, or lightening.

The reaſon we do not hear the dreadful noiſe of the thunder, ſo ſoon as we ſee the lightening, is, becauſe ſound is longer arriving to our ears, than light to our ſight.

The continuation and repetition of the ſound is cauſed by a kind of echo formed in the clouds, to which many hard bodies upon the earth may contribute, which return thoſe rollings we hear after a great clap of thunder.

Q. I have heard talk of thunder-bolts and their ſtrange effects, pray what are they?

A. What is called a thunder-bolt is nothing but a more ſolid and moſt rapid flame, which, with incredible ſwiftneſs, flies from the clouds to the earth, and through every thing ſtanding in its way, being interrupted by nothing. It ſometimes kills men and animals, burns and overthrows large trees and buildings, and ſets fire to every thing in its way.

Of the Iris or Rainbow and Halos.

Q. What is the Iris or Rainbow?

A. A beautiful arch in the heavens, ornamented with various colours, that is only ſeen when the ſpectator turns his back to the ſun, and when it rains on the oppoſite ſide. Its colours are, beginning from the under part, violet, indigo, blue, green, yellow, orange, red. VIBGYOR

Q. What was the opinion of the ancients concerning this meteor?

A. Its beautiful colours ſtruck antiquity with amazement. To the philoſophers Pliny and Plutarch, it appeared as an object which we might admire, but could never explain.—The prieſts always preferred the wood on which the rainbow had appeared to reſt for their ſacrifices, vainly ſuppoſing that this wood had a perfume peculiarly agreeable to their deities.

Q. Pleaſe

Q. Pleaſe to explain a little how the rainbow is produced, and how it acquires its beautiful and wonderful form?

A. Some philoſophers of the obſcure ages began to form more juſt conceptions concerning this meteor; but as they were ignorant of the true cauſes of colours, they left the taſk unfiniſhed for Newton to complete.—It is made, according to his theory, by the rays of the ſun darting upon drops of falling rain or miſt, and from thence reflected to the ſpectator's eye.

Q. You have ſaid nothing of the rainbows that ſometimes appear by night in the moonſhine;—what think you of them?

A. The *lunar* rainbow is formed exactly in the ſame manner, by the bright beams of the moon ſtriking upon the boſom of a ſhower.

Q. How do you account for that lucid ring we ſee diffuſed round the moon, called an halo.

A. As this always appears in a *rimy* or *froſty* ſeaſon, we may ſuppoſe it occaſioned by the refraction of light in the frozen particles of the air.

The

The Aurora Borealis.

Q. What is the cauſe of the Aurora Borealis, or that ſhining light which is often ſeen by night in the heavens, and which the vulgar call northern lights or ſtreamers?

A. They may be the reſult of certain nitrous and ſulphureous vapours, thinly ſpread through the atmoſphere above the clouds, where they ferment, and taking fire, the exploſion of one portion kindles the next, and the flaſhes ſucceed one another, till the vapour is ſet on fire, the ſtreams whereof ſeem to converge towards the zenith of the ſpectator, or that point of the heavens which is immediately over his head.

Earthquakes.

Q. What is an earthquake?

A. A ſudden motion cauſed by the inflammation of ſome ſulphureous and bituminous exhalations contained in the caverns of the earth, not far from its ſurface.—

In

—In the ſouthern countries, earthquakes are very frequent.—

Naturaliſts attribute them both to air and water, and that very truly.—To comprehend this more eaſily, it muſt be remarked, that the ſurface of the earth is, as it were, a ſhell, beneath which there are an infinite number of cavities and canals, ſufficient to contain a conſiderable quantity of air, water, &c. which, attempting to ruſh out violently, cauſes thoſe extraordinary tremblings of the earth.

Q. Are there not many ſubterraneous places in the earth from which iſſue torrents of ſmoke and of flames, rivers of melted metals, and clouds of aſhes and ſtones?

A. Yes, they are called *volcanos*; the moſt famous are thoſe of mount *Etna* in Sicily, *Veſuvius* in Naples, and *Ecla* in Iceland. The bowels of theſe burning mountains contain ſulphur, bitumen, and other inflammable matter, the effects of which are more dreadful than thoſe of thunder or of gun-powder, and they have in all ages aſtoniſhed mankind, and deſolated the earth.

LESSON

LESSON V.

Of Tides.

Q. PRAY what is meant by the tides or alternate flux or reflux of the ſea?

A. As rivers flow and ſwell, ſo alſo does the ſea: like them it has its currents, that agitate its waters, and preſerve them from putrefaction. This great motion of the ocean is called its tides. The waters of the ocean have been obſerved regularly from all antiquity to ſwell twice in about four and twenty hours, and as often to ſubſide again.

In its flux the ſea generally riſes for ſix hours, when it remains, as it were, ſuſpended, and in equilibrio; for about twelve minutes at that time it is called high water.

In its reflux the ſea falls for ſix hours, when it remains, as it were, in a like manner, ſuſpended, and in equilibrio; for about twelve

twelve minutes at that time, it is called low water.

Q. What is the cauſe of theſe wonderful appearances?

A. We are told that *Ariſtotle*, deſpairing to diſcover the true cauſe that produced them, had the folly, in ſpite of his philoſophy, to throw himſelf headlong into the ſea.—According to *Newton*, they are occaſioned by the attraction of the moon; for the waters immediately underneath the moon will be attracted up in a heap, whilſt the waters on the oppoſite ſide the earth, being but feebly attracted, will be very light; —if they be very light, they alſo will riſe, and all the neighbouring waters flowing into that place, they will ſwell into an heap, or mountain of waters, pointing to the oppoſite parts of the heavens. Thus does the moon, in once going round the earth in twenty-four hours, produce two tides or ſwells, and conſequently as many ebbs.

Theſe

Theſe tides muſt flow from eaſt to weſt, for they muſt neceſſarily follow the moon's motion, which is from eaſt to weſt.

Of Metaphyſics.

Q. What is meant by metaphyſics?

A. A ſcience more ſublime than phyſics.

Q. What is the difference of theſe two ſciences?

A. Phyſics treats of natural things, and judges of them from experience.

Metaphyſics is applied only to the contemplation of God, angels, and ſpiritual things, and judges of them only by abſtraction, and independent of material things.

Juriſprudence.

Q. What is juriſprudence?

A. The knowledge of the rights, cuſtoms, ordinances, &c. neceſſary for the adminiſtration of juſtice, being derived from

the two Latin words *jus*, right, and *prudentia*, knowledge or ſkill.

Q. How is right diſtinguiſhed?

A. Into the *right*, or *law*, *of nature*, the *law of nations*, and the *civil law*.

Q. What is the law of nature?

A. That which nature and reaſon have taught men; as the power it gives to fathers and mothers over their children.

Q. In what does the law of nations conſiſt?

A. In public acts and ſtatutes which provide for the public utility and neceſſity of the people conſidered as a body corporate, and ordain and decree whatever relates to obedience and ſubjection, dominion and government, war and peace, contracts, diviſions of lands, foundations of ſocieties, and the conſtitution of cities, towns, and villages.

Q. What is the civil law?

A. The civil law is that which is peculiar to any country or people, and adminiſters that which ariſes from their particular ſituation, and ſpecial relations and circumſtances.

ſtances. When this reſpects a city or borough town, it is called their *municipal* law. The profeſſors of this ſort of law are called civilians.

Q. Specify the ſeveral kinds of laws now in uſe in England?

A. The laws by which England are governed, are, 1ſt, *the civil law*, before-mentioned; 2d, *common law*, containing a ſummary of all the laws, rights, and privileges of the people of England, in what is called the *magna charta*, or great charter of Engliſh rights; 3d, *ſtatute law*, conſiſting of ſtatutes, acts, and ordinances of king and parliament; 4th, *canon law*, conſiſting of the canons of general councils and national and provincial ſynods, with the decrees of popes, the judgment of ancient fathers, &c. uſed in eccleſiaſtical affairs; 5th, *martial law*, uſed in all military and maritime affairs; 6th, *foreſt law*, which relates to the regulations of foreſts, and the chaſe; 7th, to theſe may be added the *law of cuſtom*, which is remarkable in ſome parts of England.

LESSON VI.

Of Medicine.

Q. IN what does the art of medicine or phyſic conſiſt?

A. In the knowledge of ſuch diſorders as the human body is liable to, and the nature of ſuch drugs and medicines as are neceſſary to remove them when they happen. And the perſon who poſſeſſes this ſkill is called a phyſician.

Q. How may this knowledge of the human body be acquired?

A. By the help of anatomy.

Of Anatomy.

Q. What do you mean by anatomy?

A. I mean a diſſection of the human body, which affords an eaſy method of examining all its parts; and to diſcover what is able to diminiſh or ſtrengthen the conſtitution.

Q. How

Q. How is medicine divided?

A. Into theoretic and practical. The theoretic applies itſelf to the contemplation and to the quality of remedies, or conſideration of the nature of ſickneſs; the practical diſcovers, by experience, the particulars of each ſickneſs, and applies ſuch remedies as are proper to promote a quick cure.

Surgery.

Q. What is ſurgery?

A. Surgery (or chirurgery) is that uſeful branch of the healing art, which conſiſts in the manual operations, with proper inſtruments, and as its effects are more evident than thoſe of medicine, it has always been much cultivated.

Q. What diſorders demand the ſurgeon's care, and make the ſubject of his art.

A. 1ſt, All kinds of *tumours* or ſwellings; 2d, *ulcers*, or running ſores; 3d, *fiſtulas*; 4th, *inflammations*, or ſtrumous diſorders; 5th, all kinds of wounds; 6th, *gangrenes*,

or mortifications; 7th, *diſlocations*, or diſjointed limbs; 8th, *fractures*, or broken limbs.

Q. What ought to be the proper qualifications of a good ſurgeon?

A. A good ſurgeon ought to be well ſkilled in anatomy, medicine, and other parts of learning; a man of good experience, great dexterity, an unſhaken courage, and ſteady hand, a clear ſight, quick thought, and of an ingenuous and honeſt mind.

Of Pharmacy.

Q. Inform me what the other part of phyſic called pharmacy is?

A. Pharmacy teaches the choice, preparation, and mixture of medicines. This ſcience is no more than the profeſſion of apothecaries. Pharmacy comes from *pharmacon*, which ſignifies a remedy. The book, directing how ſuch medicines are to be made, is called a *diſpenſatory*.

Of

Of Chemiſtry.

Q. What is chemiſtry?

A. Another part of medicine that teaches to reduce mixed bodies, ſo as to know the parts, to ſeparate the bad, to collect and refine the good.—Chemiſts have made diſcoveries of the higheſt uſe to phyſicians and ſurgeons.

Of Botany.

Q. What is underſtood by botany?

A. That other part of phyſic which treats of plants, herbs, and vegetables, and deſcribes their nature, kinds, and uſes in medicine, and other affairs of life.—The word *botany* is derived from the Greek word BOTANE, which ſignifies an herb.—A book on this ſubject is called an herbal; and a profeſſor of this art or knowledge is called a *botaniſt*, *herbaliſt*, or *ſimplar*.

Q. Is botany very neceſſary to a phyſician?

A. Yes; for it includes the knowledge of all medicinal plants, without which it would be impoſſible for him to uſe any of them, but at a very great hazard of the life of the ſick perſon, or, at the leaſt, doing him a great injury.

LESSON

LESSON VII.

Of Rhetoric and Oratory.

Q. WHAT is rhetoric?

A. The art of ſpeaking and writing well, and ornamentally, on any ſubject; to pleaſe, to touch the paſſions, and to perſuade, whether in ſpeaking or writing.—A ſpeech made according to the rules of this art, is called an *oration*, and the ſpeaker an *orator*.

Q. What are the qualifications of a good *orator?*

A. It is neceſſary that he ſhould have, I. *Invention*, by which he finds out ſuch reaſons and arguments as are adapted to perſuade or gain belief.

II. *Diſpoſition* or *order*, that he may know to diſpoſe or arrange his arguments in a proper order or method.

III. *Elocution*, which is a clear and neat manner of expreſſion, and is embelliſhed with tropes and figures.

IV. *Memory*, which is the power of the mind to retain the things he has learnt, till he ſhall be in want of them.

V. *Pronunciation*, which relates to the delivery of a diſcourſe or oration in a diſtinct and agreeable manner; with a pleaſing modulation of voice, and becoming geſture of the body; of all the qualifications of a good orator, *this* is certainly the moſt uſeful.

Q. You have mentioned tropes and figures, pray explain them to me; and firſt a trope?

A. A *trope* is an elegant and beautiful turning of a word from its proper ſignification to another. As charity is *cold*—You read *Virgil*, i. e. his writings—The clouds drop *fatneſs*, &c.

Q. What are figures?

A. The figures of ſpeech render it fine and beautiful: ſome regard the *meaning* of

of words; as, if we *ride*, let's ride, i. e. puſh on; ſome the *ſound*, as, he is not a friend, but a fiend; ſome the *order*, as, *meats* are for the belly, not the belly for *meats*; ſome relate to ſentences; they change their *ſoil*, not *minds*, who plow the main.

Q. How many parts has an oration?

A. Five; 1*ſt*, the *exordium*, or beginning of the diſcourſe; 2*d*, the *narration*, which conſiſts in a recital of facts; it ought to be *true*, or at leaſt *probable*, *perſpicuous*, and *conciſe*; 3*d*, the *confirmation* or arrangement of the proofs in an order moſt likely to perſuade; 4*th*, *confutation*; for when the orator has confirmed his own arguments, he naturally then proceeds to confute and diſprove thoſe of his adverſary. The confutation ought to be lively. 5*th*, the *peroration*, or, as it is ſometimes called, epilogue, is a recapitulation of the principal arguments. The peroration ought to excite the feeling of hatred or pity in the minds of the perſons to whom the oration is addreſſed.

Q. As it is ſo deſirable a thing to be able to read and ſpeak with propriety, give me, if you pleaſe, ſome practicable and eaſy rules by which this accompliſhment may be acquired?

A. The rules that appear to me beſt adapted to form a correct and graceful ſpeaker, are,

I. Aim at nothing higher, till you can read diſtinctly and deliberately.

> Learn to ſpeak ſlow, all other graces
> Will follow in their proper places.

II. Let your pronunciation be bold and forcible.

III. Acquire a compaſs and variety in the height of your voice.

IV. Pronounce your words with propriety and elegance.

V. Pronounce every word conſiſting of more than one ſyllable with its proper *accent*.

VI. In every ſentence diſtinguiſh the more ſignificant words by a natural, forcible, and varied emphaſis.

VII.

VII. Acquire a juſt variety of pauſe and cadence.

VIII. Accompany the emotions and paſſions which your words expreſs, by correſpondent tones, looks and geſtures.

Grammar.

Q. What is grammar *?

A. Grammar is the art of rightly expreſſing our thoughts by words.

Q. How many ſorts of words are there?

A. Nine; 1*ſt*, the article (*a*); 2*d*, noun (*b*); 3*d*,

* From the Greek word *Gramma*, a letter.

(*a*) From the Latin word *articulus*, a joint or ſmall part.

(*b*) From *nomen*, a name; it expreſſes the name of any perſon, place, or thing: as John, London, Goodneſs.

(*c*) From

3*d*, pronoun (*c*); 4*th*, adjective (*d*); 5*th*, verb (*e*); 6*th*, adverb (*f*); 7*th*, prepoſition (*g*); 8*th*, conjunction (*h*); 9*th*, interjection (*i*). Theſe are commonly called parts of ſpeech.

Q. What are the rules of grammar?

A. In living languages, as the Engliſh, French, Italian, &c. uſe is the beſt rule;

(*c*) From *pro*, for, and *nomen*, a noun, from its being uſed inſtead of a noun, to avoid the too frequent repetition of the ſame word.

(*d*) From *ad*, to, and *jacio*, to put; and ſignifies the quality of any perſon, place, or thing; as a *good* man, a *great* city, a fine *horſe*.

(*e*) From *verbum*, a word; a verb being the principal word in a ſentence.

(*f*) From *ad*, to, and *verbum*, a verb, and expreſſes the quality of the verb.

(*g*) From *præ*, before, and *pono*, to place, from its being ſet before nouns or pronouns.

(*h*) From *con*, with, and *jungo*, to join, is a part of ſpeech that joins words or ſentences together.

(*i*) From *inter*, between, and *jacio*, to throw, is a word that expreſſes any ſudden motion of the mind.

in

in the dead languages, as the Latin, Greek, &c. the rules are fixed.

Q. Is the ſtudy of the grammar of one's own country neceſſary?

A. Moſt certainly, yes; for a competent grammatical knowledge of our own language is the true foundation upon which all literature, properly ſo called, ought to be raiſed;—ignorant of the principles of grammar, one would be a ſtranger to the delicacies of the language of one's own country, and unable to expreſs one's ſelf on the moſt trifling occaſions properly, correctly, or politely.

Q. What is punctuation?

A. Punctuation is the art of marking in writing the ſeveral pauſes or reſts between ſentences, and the parts of ſentences, according to their proper quantity or proportion, as they are expreſſed in a juſt and accurate pronunciation.

Q. Which are the marks uſed for this purpoſe?

A. The

A. The period
The colon
The ſemicolon
The comma
The interrogation
The exclamation
The parentheſis

Thus marked

. : ; , ? ! ()

LESSON

LESSON VIII.

Of Poetry.

Q. WHAT is poetry?

A. A ſpeaking picture, that repreſents in verſe the life and actions of a perſon.

Q. What is a poem?

A. A complete and finiſhed piece of poetry.

Q. What ſort of verſes are chiefly uſed in our poetry?

A. Thoſe of ten, eight, and ſeven ſyllables.

Q. Give me an example of each?

A. Firſt of ten, which is the common meaſure of heroic and tragic poetry.

Think of thy Father, and his face behold!
See him in me, as helpleſs and as old!
Tho' not ſo wretched: there he yields to me,
The firſt of men in ſov'reign miſery.

Thus

Thus forc'd to kneel,—thus groveling to embrace
The ſcourge and ruin of my realm and race,
Suppliant my children's murderer to implore,
And kiſs thoſe hands yet reeking with their gore.

Second, of eight, which is the uſual meaſure for ſhort poems.

And may at laſt my weary age,
Find out the peaceful hermitage,
The hairy gown, and moſſy cell,
Where I may ſit, and nightly ſpell
O'er ev'ry ſtar the ſky does ſhew,
And ev'ry herb that ſips the dew.

Third, of ſeven, called Anacreontic, from Anacreon, a Greek poet, who wrote in verſe of this meaſure.

Faireſt piece of well-form'd earth,
Urge not theſe your haughty birth.

Q. Which are the kinds of poetry moſt in uſe?

A.

A. The kinds of poetry are various; the moſt conſiderable ſorts are, 1*ſt*, *Paſtoral*, that deſcribes a ſhepherd's life, or that of rural nymphs and ſwains. 2*d*, *Elegy*, is a mournful poem, or funeral ſong. 3*d*, *Lyric Poetry*, is generally uſed in compoſition of ſongs and odes. 4*th*, *Pindaric* ode (ſo called from its inventor Pindar) is a ſort of poetry which conſiſts of looſe and free numbers, and unequal meaſures. 5*th*, *Satire*, is a free, jocoſe, witty, and ſharp poem, ſeverely inveighing againſt vice and all corrupt manners and perſons. 6*th*, *Comedy*, is an agreeable imitation of the actions, humours, and cuſtoms of common life. 7*th*, *Tragedy*, in which the calamities of illuſtrious men are repreſented and acted over again. 8*th*, *Epic* or *Heroic Poem*, is a poetical narration in verſe of ſome illuſtrious and important actions of the hero celebrated in the poem; as the great exploits of Achilles in the Iliad of Homer. 9*th*, *Epigram*, is an inferior ſort of poem, whoſe peculiar character

racter is brevity, beauty, and ſharp turn of wit at the end.

As to the Acroſtic, Rondeau, Echo, &c. they are ſuch trifling pieces of art, that ſcarce any poet but in a merry vein, or on ſome jocoſe occaſion, will ever uſe them.

The Languages.

Q. What is language?

A. Language is a ſet or collection of ſounds or notes made uſe of by any nation or people to expreſs the ideas of their mind, and by this means to render their thoughts intelligible to each other; and this communication of our ſentiments to others is called ſpeech, or ſpeaking.

Q. Whence comes the great number and diverſity of languages?

A. From the building of the Tower of Babel, Geneſis, chap. ii.

Q. How many original languages, or, as they are commonly called, mother tongues, are there in the world?

A. 1.

A. 1. The Hebrew; 2. the Greek; 3. the Latin; 4. the old Gothic.

Q. What are the properties of the Hebrew?

A. The chief properties of the Hebrew are, 1ſt, That its letters are twenty-two, of which the following table ſhews.

The

The Name.	num.	form	Finals †.	fimls.	Sound or Power.
Aleph	* 1	א			a *broad, as in*
Beth	2	ב		כ	b [war
Gimel	3	ג		נ	g *hard, as in*
Daleth	4	ד		ר ך	d [give, get
He	5	ה		תח	e *as in* where
Vau	6	ו		ן ו י	u *as* oo, w *before*
Zain	7	ז			z [*a vowel*
Heth	8	ח		ת	h *hard aſperate*
Teth	9	ט		סמ	th
Yod	10	י			i *like* ee
Caph	20	כ	ך 500		k *or* c *hard, as*
Lamed	30	ל			l [come
Mem	40	מ	ם 600		m
Nun	50	נ	ן 700		n
Samech	60	ס		ם	ſh
Oin	70	ע		ע צ	o *long, as* whole
Pe	80	פ	ף 800		p
Jaddi	90	צ	ץ 900		j *ſoft, as* s *in* trea-
Koph or Quoph	100	ק			q *or* qu [ſure
Reſh	200	ר			r
Shin or Sin	300	ש			s
Tau	400	ת			t

Of theſe letters five are vowels, namely, א ה ו י ע; all the reſt are conſonants.

* That is, numeral power or import as an arithmetical mark.

† Letters thus written at the *end* of a word.

2d,

2*d*, That many words occur without any of the vowels, which may be pronounced as if a ſhort *e* or *a* ſtood between the conſonants; as דבר DBR, pronounce *Deber* or *Dabar*; פקד PQD, or *peqed* or *paqad*. 3*d*, That *moſt* feminine nouns end in ת or ה, moſt others are maſculine. 4*th*, That the plural maſculine is formed by adding ים, and the plural feminine by adding ות to the ſingular. 5*th*, That the verbs have only *two tenſes*, *paſt* and *future*, and *two genders*, *maſculine* and *feminine*. 6*th*, That Hebrew is read from the right hand to the left, and not from the left to the right, as the Engliſh and other weſtern nations. 7*th*, That from the Hebrew ſprang the Chaldee, the Syriac, the Arabic, the Samaritan, and the Ethiopic. The Arabic is the moſt copious, having a thouſand different words for a ſword, five hundred for a lion, and two hundred for a ſerpent.

Q. What are the properties of the Greek language?

A. 1*ſt*,

A. 1*ſt**, That it has a wonderful copiouſneſs of words. 2*d*, That it is a language which abounds in compounds and derivatives. 3*d*, That it enlarges and ennobles the human mind by laying open the writings of the Greek philoſophers, poets, and hiſtorians.

Q. What languages have had their riſe from the Latin?

A. The Latin can boaſt a noble progeny; for ſhe gave birth to the Italian, French, Spaniſh, Portugueſe, and a good part of the Engliſh.

Q. Which are the daughters of the old Gothic tongue?

A. The two great branches, the Teutonic and Saxon languages; from whence all the northern tongues, as ſo many grandchildren, had their being; as the Swediſh, Daniſh, Norwegian, high and low Dutch, Flemiſh, Scots, and Engliſh.

* The Greek and Latin alphabets are purpoſely omitted, as they are in the hands of every ſchoolboy.

Q. Who

Q. Who invented that orderly arrangement of the letters which we call by the Greek name alphabet *?

A. Cadmus, King of Thebes, ſon of Agener, King of Phenice, in the year of the world 1620.

The Hebrews, ſtruck with admiration at this art, have called it *Dikduk*, that is, ſubtle invention.

The Americans, when they firſt ſaw a perſon read from a book, believed that the paper ſpoke.

We are told that an Indian ſlave, being ſent by his maſter with a baſket of figs and a letter to a gentleman, ate on the way part of the fruit, and delivered the reſt with the letter. The gentleman having read the letter, and not finding the quantity of figs it mentioned, accuſed the ſlave of eating thoſe miſſing, and read him the letter; but the poor Indian proteſting his innocence, curſed the paper, and accuſed it of falſe evidence.

* From *Alpha*, *Beta*, the two firſt Greek letters.

Some time afterwards he was again ſent on the ſame commiſſion, with a letter that expreſsly marked the number of figs he was to deliver. On the way he again ate a part as before, but with this precaution, that he might not be again accuſed, he firſt hid the letter under a large ſtone; moſt firmly believing, that if it did not ſee him eat the figs, that it could not poſſibly be a witneſs againſt him. But the poor miſerable wretch, accuſed more than ever, confeſſed the crime, and held in admiration the virtue of the paper.

LESSON

LESSON IX.

The Mathematics.

Q. WHAT is meant by the mathematics?

A. A ſcience that contemplates whatever is capable of being numbered or meaſured. It ranks the firſt of all ſciences, becauſe it conſiſts only in demonſtrations.

Q. Of what uſe are the mathematics?

A. They open and extend our ideas, ſtrengthen and improve our underſtandings, fix our attention, and by teaching a habit of juſt reaſoning, prepare us for all other kinds of ſtudies and important employments of life.

Q. How are the mathematics divided?

A. Into arithmetic, geometry, architecture, aſtronomy, and mechanics.

Arithmetic.

Q. What is arithmetic?

A. The art of computing by numbers. Addition, ſubtraction, multiplication, and diviſion, are its principal rules, all the others ariſing only from different applications of them.

Q. What does addition teach?

A. To add many ſums together, to know their total value.

Example.

3
more 4
more 12

make 19

Which is the total value of thoſe three numbers.

Q. What is ſubtraction?

A. A rule teaching us to take a leſs number from a greater, to know what remains.

Example.

From 58
Take 49

Remains 9
Which is the number demanded.

Q. What is the uſe of multiplication?

A. It teaches to encreaſe the greater of two numbers given, as often as there are units in the leſs.

Example.

Multiply 15
by 4

And they will produce 60
Which is the third number required.

Q. What is the fourth rule of arithmetic?

A. Diviſion.

Q. What does it teach?

A. To find how often one number is contained in another; or to divide any number into what parts you pleaſe.

Example.

Divide 28 by 4, the anſwer will be 7.

Q. What are the other rules of arithmetic?

A. Reduction, rule of three, practice, alligation, fellowſhip, extraction of roots, intereſt, &c. what relates to annuities, penſions, &c. with every thing concerning commerce, and merchant accounts.

Q. To whom is this ſcience neceſſary?

A. To every perſon. It forms the mind, and diſpoſes it to reaſon juſtly on all other ſciences. It teaches us to ſet our affairs in order. In a word, arithmetic is the ſoul of commerce, and the mother of all the ſciences.

Q. At what age may a child begin to learn to number?

A. When he is advanced in writing, and at leaſt nine or ten years old. It is to no purpoſe for them to begin younger, for they will make no progreſs, let the maſter's care be ever ſo great; becauſe the older they are,

are, the more they are able to reflect with judgment.

Commerce.

Q. What is commerce?

A. The art of exchanging one thing for another, or buying or ſelling merchandiſe, &c. with an intention to gain.

Q. Has commerce been a long time carried on?

A. It appears to be as ancient as the world. At firſt it conſiſted in nothing more than in the exchange of things neceſſary for life, as it is at preſent practiſed on the coaſts of *Siberia*, *Norwegian*, *Lapland*, and *Muſcovite Lapland*; amongſt the different nations of *Africa* and *Aſia*, and almoſt all of *America*.

Q. Was money, which we find of ſuch infinite utility in commerce, in uſe at that time?

A. Not at all; it was in ſucceeding ages that it came into uſe.

Q. What nations have made themſelves moſt famous by their commerce?

A. The Phenicians, Egyptians, Carthaginians, Athenians, Rhodians, Romans, Gauls, and Flemings; at preſent the Engliſh, Dutch, Venitians, and Genoeſe, carry on the moſt extenſive commerce.

Geometry.

Q. What is geometry?

A. A ſcience teaching the menſuration of quantity in all its extents, length, breadth, and thickneſs.

Q. What is the meaning of the word geometry?

A. It is derived from the Greek, and ſignifies the art of meaſuring the earth. It had its riſe among the Egyptians, who were, in a manner, compelled to invent it to remedy the diſorders occaſioned in their lands by the annual

annual overflowings of the river Nile, which defaced every boundary.

Q. How is quantity diſtinguiſhed?

A. Into lines, ſuperficies, and ſolids.

Q. What is a line?

A. A line is formed by the motion of a point; and therefore is one dimenſion only, i. e. length.

Q. How is a ſuperficies generated?

A. By the motion of a line, and ſo hath two dimenſions, i. e. length and breadth.

Q. How is a ſolid produced?

A. By the motion of a ſuperficies, and hath three dimenſions, length, breadth, and thickneſs.

Q. How is geometry divided?

A. Into three principal parts:

1. *Altimetry*, which is applied to the meaſuring all heights, acceſſible or inacceſſible.
2. *Planimetry*, which teaches the menſuration of ſurfaces in ſquare meaſures, ſuch as ſquare miles, yards, feet, inches, &c.

3. *Stereometry*, which is the menſuration of all kinds of ſolid bodies in ſolid, or cubic meaſures, as cubic feet, cubic inches, &c. This alſo includes *gauging*, or the art of finding the contents of any caſk or veſſel, or the quantity of liquid contained in them; alſo timber meaſure, ſuperficial and ſolid.

LESSON

LESSON X.

Architecture.

Q. WHAT is architecture?

A. The art of building or raiſing all kinds of edifices; as houſes, churches, palaces, &c.

Q. How is architecture diſtinguiſhed?

A. Into three ſorts;—civil, military, and naval.

Q. In what conſiſts civil architecture?

A. In external ornaments and internal conveniences.

Q. What are the orders of civil architecture?

A. They are generally reckoned five; 1. The Tuſcan; 2. The Doric; 3. The Ionic; 4. The Corinthian; and 5. The Compoſite. To theſe may be added the Gothic, which is an old method of building, ſtill preſerved in the conſtruction of almoſt all cathedral

cathedral churches. Theſe orders take their names from the people who invented them.

Q. What are the qualifications neceſſary for a good architect?

A. He ought to underſtand drawing, geometry, optics, arithmetic, hiſtory, and fable.

Q. In what conſiſts military architecture, called fortification?

A. In conſtructing ſuch works about a town, &c. as will enable a ſmall number of men within, to withſtand, for a conſiderable time, the aſſaults of a greater number without. A town fortified is called a *fortreſs*.

Q. What is naval architecture?

A. The art of conſtructing veſſels, whether for the ſervice of war or commerce.

Painting.

Q. What is painting?

A. An art, teaching by drawing, and the application of colours, to repreſent all ſorts of objects.

Q. What

Q. What are the moſt eſteemed paintings?

A. Thoſe repreſenting hiſtorical events.

Q. How many ſorts of paintings are there?

A. Five; 1. In oil; 2. In freſco; 3. In water-colours; 4. On glaſs; and 5. In enamel; to which may be added, miniature and paſtel. Painting in oil was unknown to the ancients. This art has received the greateſt advantage from this diſcovery.

Q. What are the qualifications of an excellent painter?

A. He ought to underſtand drawing in its higheſt perfection. He ought to have ſome knowledge of anatomy and geometry. He ought to read a great deal, to have great judgment and patience: he ought to be ſober and fond of his art.

Sculpture.

Q. What is ſculpture?

A. The art of carving, or hewing ſtone into images. Every thing that is engraved

or

or worked in relieve makes a part of this art.

Its antiquity appears from many places of the holy ſcripture—from the idols of Laban that Rachel carried off, and by the golden calf ſet up by the Iſraelites in the deſart.

Optics.

Q. What is optics?

A. Optics is the ſcience of viſion, whether natural, as performed in the eye, or artificial, as effected by inſtruments.

Q. How is viſion produced?

A. Viſion, or the ſenſe of ſight, is in all caſes produced by the action of the rays of light upon the fine expanſion of the *optic nerve* in the eye, called the *retina*.

Q. Pray what do you call light?

A. That quality of certain bodies, whereby they become viſible to us, and render others ſo.

Q. Is not the ſun the fountain of light?

A. Yes; but in what manner that great fiery maſs is fed with continued fuel to keep

keep up his force, is a queſtion equally uſeleſs and impoſſible to be reſolved; whether comets travel from other ſyſtems with a proviſion of this nature, or whether the etherial vapours come from all parts with their ſupply, is not worth enquiring after. HE that made the comet ſweep through immeaſurable tracts and ſpace, could, with equal eaſe, give permanent light and fire to the ſun.

Q. Though it appears a taſk beyond the reach of human abilities to calculate exactly how long a ray of light is upon its journey, in travelling from the ſun to enlighten our hemiſphere, yet has it not been attempted?

A. Yes; and found to be ſeven minutes, though it is nearly a diſtance of ſeventy millions of miles; conſequently light travels at the rate of a hundred and fifty thouſand miles in a ſingle ſecond, which is upwards of a million times ſwifter than a ball from the mouth of a cannon.

Mechanics.

Mechanics.

Q. What is mechanics?

A. That ſcience which teaches the nature and laws of motion, the action and force of moving bodies; and the conſtruction and effects of all thoſe machines and engines which go by the name of mechanic powers.

Q. What is motion?

A. A continual and ſucceſſive change of place.

Q. What is reſt?

A. The continuance of a body in the ſame place for any time.

Q. Pray explain what is meant by a mechanic power?

A. Any machine or engine by which a man can raiſe a greater weight, or overcome a greater reſiſtance than he could do by his natural ſtrength without it.

Q. How many mechanic powers are there?

A. They are ſaid to be ſix in number; namely, the *lever*, by which we lift weights much

much greater than our ſtrength, unaſſiſted, could overcome: the *axle* and *wheel*, by which we can lift them to greater heights: the *pulley* lifts them higher ſtill: the *ſcrew*, which, if it could move without friction, would give him greater force than any of the reſt: the *wedge*, uſed in cleaving wood, &c. and the *inclined plane*, by which heavy bodies are rolled up with greater eaſe. And of theſe all the moſt compound engines now conſiſt; as clocks, watches, orreries, moſt ſorts of water engines, with an infinite variety of others.

LESSON

LESSON XI.

Of Diviſion of Time, or Chronology.

"A little chronology will be highly uſeful." KNOX.

Q. WHAT is chronology?

A. A ſcience that teaches the method of meaſuring time, and diſtinguiſhing its parts.

Q. What is time?

A. Time is the duration of things: its parts are centuries, years, months, weeks, days, hours, minutes, ſeconds, &c. and by theſe the larger and leſſer intervals of time are eſtimated and meaſured.

Q. What is a century?

A. Century, or age, is a courſe of a hundred years.

Q. What is a year?

A. A ſpace of twelve months, which is the time the ſun takes in paſſing through the twelve ſigns of the zodiac.

Q. What

Q. What is the zodiac?

A. A circle, ſhewing the earth's annual, or yearly, path through the heavens. On this circle are marked the twelve ſigns, which are numbers of ſtars reduced by the fancy of men into the forms of animals, and may be deſcribed in order thus:

The *ram*, the *bull*, the *heavenly twins*,
And next the *crab*, the *lion* ſhines,
The *virgin* and the *ſcales*:
The *ſcorpion*, *archer*, and *ſea goat*,
The man that holds the *water pot*,
And *fiſh* with glittering tails.

Q. From what is ſaid of the patriarchs having lived ſo many centuries, and ſome even to the age of nine hundred years, may we not believe that the years were then ſhorter than at preſent?

A. No; for we learn from Moſes that the year conſiſted then, as now, of twelve months. In his hiſtory of the deluge, he tells us, that after the rains, which began the

the ſeventeenth day of the ſecond month, had fallen upon the earth for the ſpace of forty days and nights, it was only in the ſeventh month that the ark, which floated upon the waters, reſted upon the mountains of Arminia; and, in the tenth, that land began to appear.

Q. What is a month?

A. A month is juſt the time the moon is going round the earth, which revolution ſhe performs in twenty-ſeven days, ſeven hours, and forty-three minutes; ſo that there are thirteen lunar months in a year, though, for conveniency, and a greater regularity, they are made but twelve in our almanacks, by adding a greater number of days to each month than it really contains.

Q. How many weeks are there in a year?

A. Fifty-two.

Q. How many days are there in a week?

A. Always ſeven.

Q. How are they named?

A. Sunday, Monday, Tueſday, Wedneſday, Thurſday, Friday, and Saturday. To

theſe

theſe days the Pagans gave the names of the ſun, moon, and planets: to the firſt the name of the ſun, to the ſecond of the moon, to the third of Mars, to the fourth of Mercury, to the fifth of Jupiter, to the ſixth of Venus, and to the ſeventh of Saturn.

Q. Do all nations reckon them in the ſame order?

A. No; the Chriſtians count from Sunday, in memory of the reſurrection of our Saviour, the Jews from Saturday, the Mahometans from Friday.

Q. What is a day?

A. A day is either artificial or natural. The natural day contains twenty-four hours, the artificial day from ſun's riſe to ſun-ſet.

Q. How is the natural day divided?

A. Into two parts, night and day, properly ſo called.

Q. Is there no other diviſion of the natural day?

A. Yes; into morning, noon, evening, and midnight.

Q. When

Q. When do we begin the day?

A. The Engliſh, French, Dutch, Germans, Spaniards, Portugueſe, and Egyptians, begin the day at midnight; the ancient Greeks and Jews, with the modern Italians and Chineſe, begin at ſun ſetting, and the ancient Babylonians, Perſians, Syrians, with the modern Greeks, at ſun-riſing.

Q. What is an hour?

A. An hour is the 24th part of a natural day, as ſhewn by clocks and watches. It is divided into ſixty equal parts, called ſeconds, and theſe again into ſixty equal parts, called thirds.

Q. What is meant by the ſeaſons of the year?

A. The changes and varieties that happen in nature by the yearly revolution of the earth round the ſun.

Q. How many are there?

A. Four.

Q. How are they called?

A. Spring, ſummer, autumn, and winter.

Q. How long does each ſeaſon continue?

A. Three

A. Three months.

Q. When does ſpring begin?

A. On the 21ſt of March.

Q. When does ſummer begin?

A. On the 21ſt of June.

Q. When does autumn begin?

A. On the 23d of September.

Q. When does winter begin?

A. On the 21ſt of December.

Q. When is the length of the day and night equal?

A. This happens twice every year, once on the 21ſt of March, and again on the 21ſt of September. Both theſe times are called the equinoxes.

Q. How do we call the light that appears before the riſing and after the ſetting of the ſun?

A. The light ſeen before the ſun is called Aurora, and after he ſets, the twilight.

Q. What do we call the dog days?

A. Thoſe intenſely hot days between the 19th of July, and the 28th of Auguſt, becauſe the ſtar called the canicular, or the great dog ſtar,

ſtar, during that time, riſes and ſets with the ſun.

Q. When is the longeſt day?

A. On the 21ſt of June, at the beginning of ſummer, after which they begin gradually to decreaſe.

Q. When is the ſhorteſt day?

A. The 21ſt of December, at the beginning of winter, after which they begin gradually to encreaſe.

Q. Is this change the ſame through every part of the earth?

A. No; it is more or leſs according as the country is ſituated with reſpect to the courſe of the ſun. There is, for example, ſome countries where the length of the day and night is exactly the ſame; others where the night, during the ſummer ſeaſon, is only an hour, others where the night continues always ſix months, and the day conſequently as many. This variety in the length of the day and night is illuſtrated by the globe.

Q. What

Q. What other name is given to the 21ſt of June?

A. The ſummer ſolſtice.

Q. And to the 21ſt of December?

A. The winter ſolſtice.

Q. What are the names of the twelve months in their order?

A. January, February, March, April, May, June, July, Auguſt, September, October, November, December.

Q. How many days does each of theſe months contain?

A. Seven have thirty-one days; January, March, May, July, Auguſt, October, and December. Four have thirty days; April, June, September, and November; and one alone, February, which has twenty-eight or twenty-nine.

According to theſe verſes.

Thirty days hath September,
April, June, and November,
February twenty-eight alone,
All the reſt hath thirty-one;

But when leap-year comes that time
Hath February twenty-nine.

Q. How did the Romans divide their month?

A. Into calends, nones, and ides; calling the firſt day of every month calends.

Q. How many days are in a year?

A. Three hundred and ſixty-five.

Q. Is this number always the ſame?

A. No; it changes every four years, and the fourth year, which is called Biſſextile, or leap year, has always one day more.

Q. How comes this change?

A. Every year conſiſts of 6 hours over the 365 days. Theſe 6 hours in four years amount to one whole day, which is then added at the end of February; on this account it is that this month has ſometimes twenty-nine days.

Q. Did the Romans reckon their months like us?

A. No; they had firſt only ten, afterwards they added two, but they always began their year at March.

Q. Who were the two great reformers of the Calendar?

A. Julius Cæſar and Pope Gregory XIII.

Q. What is an olympiad?

A. A ſpace of four years. The ancient Greeks reckoned in this manner, becauſe they celebrated at the beginning of every fifth year their games, which were conteſts in all the manly exerciſes, ſuch as wreſtling, boxing, running, chariot races, &c. in a plain near the town of Olympias; for this reaſon they were called olympiads. They were firſt inſtituted by Hercules in honour of Jupiter, 774 years before Chriſt.

Q. What is an epoch?

A. An epoch is a certain point of time from which hiſtorians begin to reckon; as the creation of the world, the building of Rome, the birth of Chriſt, the deſtruction of Jeruſalem, &c. It alſo remarks the time from one remarkable event to another. It is, for example, an epoch from the creation of the world to the deluge, &c.

Q. What is a luſtrum?

A. A ſpace of five years, uſed only by the Roman poets.

Q. What is a jubilee?

A. A public feſtivity.

Q. What is an indiction?

A. A revolution of fifteen years, uſed only by the Romans, for indicating the times of certain payments made by the ſubjects to the republic. It was eſtabliſhed by Conſtantine in the year 312.

Note. According to what æra we reckon by, we date the time of every memorable tranſaction, as,

A. M. i. e. *anno mundi*, the year of the world.

A. D. i. e. *Anno Domini*, the year of our Lord.

Ab U. C. i. e. *ab Urbe condita*, from the building of the city of Rome, and ſo of the other epochs.

For example, we ſay,

Noah's flood happened A. M. 1656

The

The kings were expelled, and Conſular government eſtabliſhed at Rome.	ab U. C. 244
Charlemagne was crowned emperor of the weſt.	A. D. 800

LESSON XII.

Coſmography, or the Univerſe.

Q. WHAT is coſmography?

A. A deſcription of the world.

Q. What do we underſtand by the world?

A. The heavens and the earth; in a word, the whole univerſe.

Q. How is coſmography divided?

A. Into two parts; aſtronomy and geography.

Q. What is the uſe of aſtronomy?

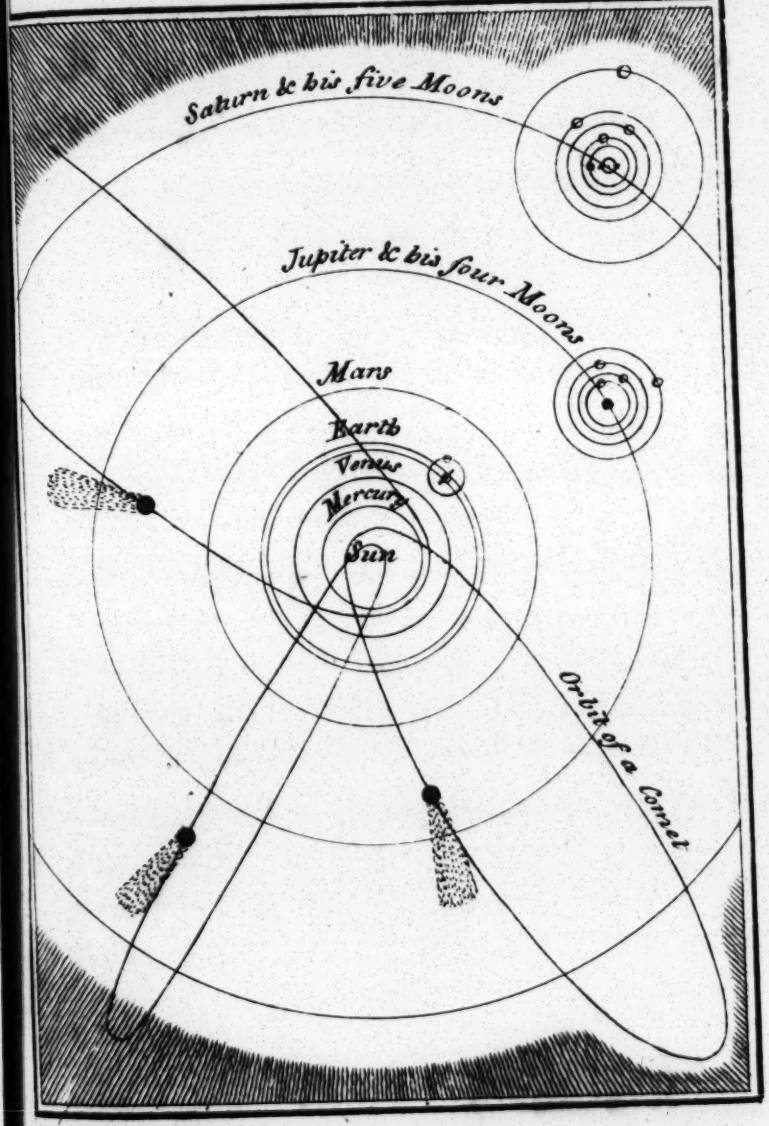
A. It gives us the knowledge of the heavenly bodies, and teaches us, from the regularity of their motions ſince their creation by God, that there is an infinite power who directs their courſes according to the order he has eſtabliſhed.

Q. How is this ſcience moſt eaſily acquired?

A. As

Plate I

The Solar System.



A. As the figure of the world is round, we make uſe of two globes, one called the cœleſtial, upon whoſe ſurface is painted the ſtars, reduced to conſtellations, with the circles of the ſphere; and the other the terreſtrial, which ſhews us upon its ſurface a deſcription of the land and water.

Q. What do you call the heavens?

A. Thoſe regions or fields of air we ſee lying all around us above the atmoſphere, in which are ſituated all the ſhining bodies, the ſun, moon, planets, and ſtars.

Q. What is the atmoſphere?

A. A thin fluid maſs of matter which ſurrounds the earth. Its uſe is not only to ſuſpend the clouds, furniſh winds and rain, and ſerves for the common purpoſes of breathing, but is alſo the cauſe of the morning and evening twilight, and all the glory and brightneſs of the firmament. Its height is about twenty-ſeven or twenty-eight miles. We may juſtly ſay that the atmoſphere ſerves as a ſhell or covering to the earth?

Q. What is the ſun?

A. That glorious luminary created by God as the ſource of light and heat to the world.

Q. Is the nature of the ſun known.

A. No; ſome imagine it to be a common fire, continually ſupplied with globules of a combuſtible matter, and therefore have thought it to be the place of hell; others ſay that it is an elementary fire, which ſubſiſts without any kind of nouriſhment.

Q. Is the ſun larger than the earth?

A. Yes; infinitely. Some aſtronomers believe it to be a million of times as large. It appears ſo very ſmall on account of its diſtance, which is ſo very great, that a cannon ball would be twenty-five years coming from thence to the earth, even if it flew as ſwift as it does when it is firſt diſcharged from the mouth of the cannon.

Q. Does the ſun move, or is he always fixed?

A. It was formerly ſuppoſed that he moved, becauſe he ſeemed ſo to do.—But it

is now demonſtrated that he always remains fixed in the ſame place, and that it is the earth that moves round about him.

Q. Does the ſun afford us any other benefit but that of light?

A. Yes; it ripens the fruits of the earth by its heat.

Q. Why is not the ſun always viſible after it riſes?

A. A thick cloud will ſometimes conceal it from our view, by interrupting its rays. Of this one may be eaſily convinced:—if we ſtand upon the top of a high mountain above the clouds, the ſun will then be viſible, but totally hid from thoſe in the valley.

Q. What is the moon?

A. A large round globe like our earth in matter and form, deſigned to enlighten us by night.

Q. Is the moon a luminary like the ſun?

A. No; it is a dark opaque body, and receives all the light ſhe ſhines with from

the ſun, and by reflection conveys it to *us* in the ſun's abſence.

Q. How do we call the different degrees of light with which ſhe ſhines?

A. Her phaſes. At NEW moon ſhe is between the ſun and the earth, and her enlightened parts are hid or turned from us; when FULL, we ſee all her enlightened ſide, and ſhe appears horned; HALF, or a gibbous moon, when a little part of her light turns towards us.

Q. What is the reaſon why ſome parts of the moon's face looks duſky, and others light?

A. The bright parts of the moon's body are the higheſt parts of land, which reflect the light of the ſun, as hills, mountains, promontories, iſlands, &c. and the darker parts of the moon are caverns, deep pits, and places which reflect not the ſun's light ſo ſtrongly as others.

Q. Is the moon larger than the earth?

A. No; the earth is at leaſt fifty times bigger than the moon.

Q. What

Q. What is its diſtance from the earth?

A. It is not exactly known, but ſuppoſed to be about two hundred and forty thouſand miles.

Q. What influence has the moon?

A. She is ſaid to be the cauſe of the tides.

Q. How happens that?

A. By attracting the waters of the ſea, ſhe raiſes them higher.

Q. What elſe is obſervable of the moon?

A. That ſhe is inhabited: for to what end elſe can ſerve the diſtribution of land and water, mountains and vallies, but, as on our earth, to nouriſh and ſuſtain men, beaſts, and vegetables.

Q. How are the ſtars diſtinguiſhed?

A. Into *fixed* ſtars, and *planets*, or moving ſtars.

Q. What is a planet?

A. A ſtar that has a periodical and regular motion.

Q. How many planets are there?

A. Six;

A. Six; their names are, 1ſt, Mercury; 2d, Venus; 3d, Earth; 4th, Mars; 5th, Jupiter; 6th, Saturn; which may be remembered in their order by theſe verſes:

First Mercury, Venus, Earth, then with her Moon,
Mars, Jove four, Saturn five, move round the Sun.

Q. In what form or manner do theſe planets move?

A. They all, in different ſtated periods of time, perform their motion round the ſun from weſt to eaſt, in orbits nearly circular.

Q. Have all the planets moons attendant upon them like our earth?

A. No; ſuch only of the planets as are fartheſt from the ſun, and therefore enjoy leaſt of his light, have that deficiency made up by ſeveral moons, which conſtantly accompany and revolve about them, as our moon revolves about our earth. Saturn, the remoteſt planet, has five, and Jupiter has four, which was firſt diſcovered by the teleſcope, nor are they to be ſeen without it.

Theſe

Theſe moons are generally called ſatellites, or ſecondary planets.

Q. What is a comet?

A. Comets are large ſolid bodies, with long tranſparent trains, or tails, iſſuing from that ſide which is turned away from the ſun.

Q. Does the appearance of a comet foretell any great event?

A. No; it was formerly ſuppoſed they did, but it was mere ſuperſtition.

Q. What is the earth?

A. The earth is the globe we inhabit.

Q. How large is it?

A. Its circumference is about twenty-five thouſand miles.

Q. What is its true figure?

A. Though we often call it a globe, yet it is by no means perfectly round, but widened out at the equator, and flattened at both poles like a turnip; or if you are fonder of a hard name, its figure may be called an oblate ſpheroid.

Q. Is it always fixed, or does it move?

A. It

A. It moves conſtantly round the ſun.

Q. How is this motion performed?

A. Two ways: the earth turns round its axis every twenty-four hours, which alternately cauſes day and night, as either ſide is turned toward, or from the ſun, whilſt it revolves round that luminary in three hundred and ſixty-five days, ſix hours, which periodical revolution produces the four ſeaſons of the year. This double motion of the earth may be compared to a coach turning round in a court-yard—the wheels go round their own axis, at the ſame time they move round the yard. It travels at the rate of fifty-eight thouſand miles every hour, which is one hundred and twenty times ſwifter than a cannon-ball; and, by its rapid motion on its axis, the inhabitants of London are carried five hundred and eighty miles every hour.

Q. What is an eclipſe?

A. An eclipſe is nothing but a total or partial privation of the light of the ſun or moon.

Q. How

Q. How many ſorts of eclipſes are there?

A. Two; one of the ſun, the other of the moon.

Q. When does an eclipſe of the ſun happen?

A. When the moon comes between the ſun and the earth. In this poſition ſhe will wholly or partly intercept the rays of the ſun, which is then ſaid to undergo an eclipſe. When this eclipſe is total, the darkneſs is ſo great, that the ſtars will appear.

Q. What is the cauſe of the eclipſe of the moon?

A. By the poſition of the earth between the moon and the ſun, it is eaſy to be conceived that the moon having no light of her own, when the rays of the ſun are intercepted, ſhe will appear dark or duſky.

An eclipſe of the *ſun* never happens but at a new moon, nor one of the *moon* but when ſhe is full.

LESSON

LESSON XIII.

Of Geography.

Totam licet animis, tanquam oculis luſtrare terram mariaque omnia.

" One may ſurvey the whole earth, and all the ſeas " that ſurround it, in the mind, juſt as they are " preſented to the eye." CICERO.

Q. WHAT is geography?

A. A deſcription of the earth.

Q. How is the earth divided?

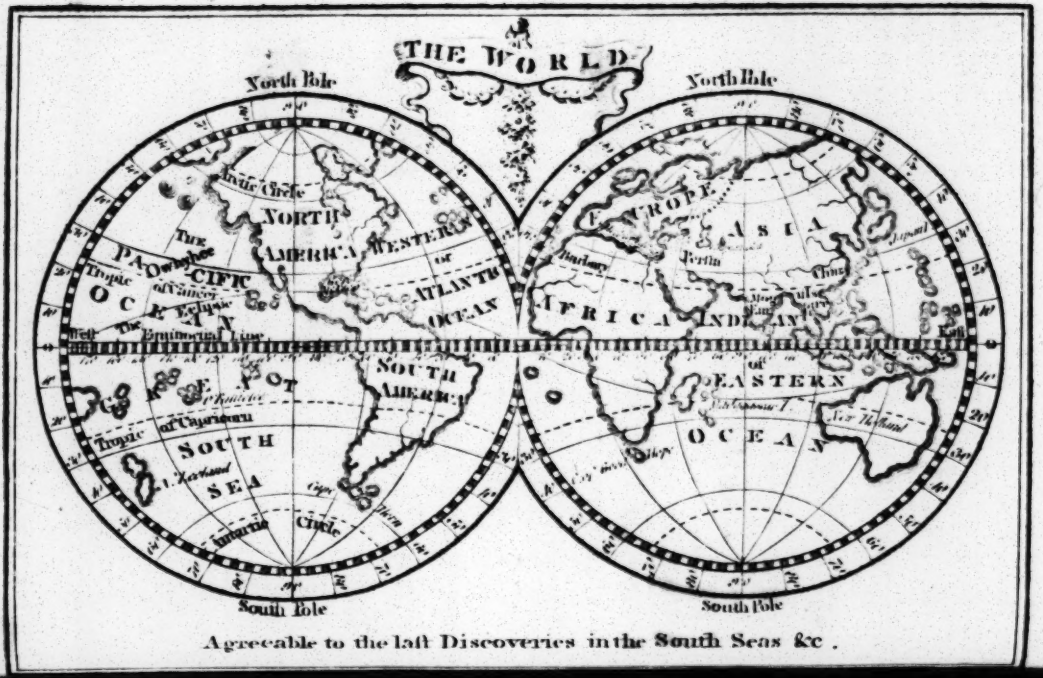
A. Into four parts; 1ſt, Europe, we inhabit; 2d, Aſia; 3d, Africa; 4th, America.

Q. By whom was the earth peopled?

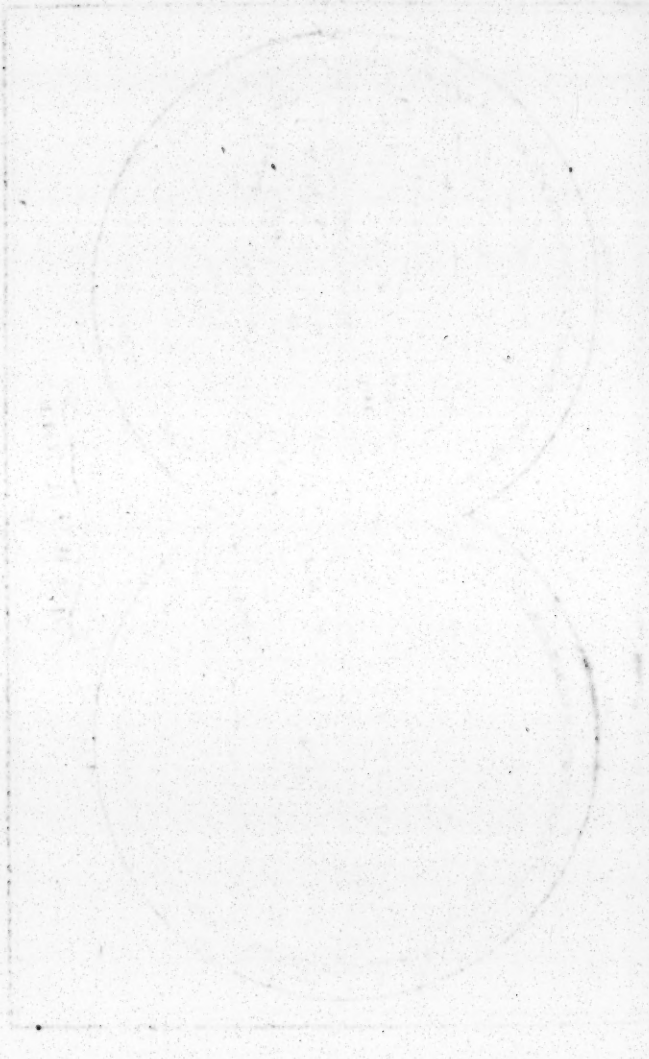
A. By the children of Noah,—*Shem*, *Ham*, and *Japhet*.

Q. Why is America often called the new world?

A. Becauſe



Agreeable to the last Discoveries in the South Seas &c.



A. Becauſe it was not diſcovered till about the end of the fifteenth century, not quite three hundred years ago.

Q. By whom was America diſcovered?

A. By Chriſtopher Columbus, ſent by Ferdinand king of Spain.

Q. Why then is it called America?

A. Becauſe one named *Americus Veſputius*, being ſent after Columbus, diſcovered a greater part of the continent. It is named alſo the Weſt Indies, to diſtinguiſh it from the Eaſt Indies in Aſia.

Q. Which is the largeſt of theſe four parts?

A. America.

Q. Which has moſt mines of gold and ſilver?

A. The ſame.

Q. Which of them is the richeſt in natural productions?

A. Aſia. It is this quarter that furniſhes our ſpices.

Q. And where is the heat of the ſun moſt intenſe?

A. Africa,

A. Africa, which produces negroes, a race of people quite black, having flat noſes, thick lips, and hair like wool.

Q. And which is that moſt peopled, and where the ſciences are moſt cultivated?

A. Europe, though the ſmalleſt of the four.

Q. How are the four parts of the world diſtinguiſhed?

A. From the time of Charles the Great they have been diſtinguiſhed by the names of eaſt, weſt, north, and ſouth.

Q. How do we know where to find thoſe parts?

A. Only by turning the back to the riſing ſun, and on the left hand will be the ſouth, on the right hand the north, behind the eaſt, and directly oppoſite will be the weſt.

Q. How are the winds that blow from theſe four quarters named?

A. They are called in the ſame order; 1ſt, the Eaſt-wind; 2d, Weſt-wind; 3d, North-wind; and 4th, South-wind.

Q. What

Q. What is a ſea?

A. A ſea is a large collection of ſalt water.

Q. Whence is it that the ſea water is charged with ſaltneſs, while that of rivers is mild, freſh, ſweet, and fit for human purpoſes?

A. It is ſuppoſed to ariſe from great beds of ſalt lying at the bottom of the ocean.

Q. Is it neceſſary that this water ſhould be ſalt?

A. Yes; for the water of the ſea not flowing like that of a river, would be apt to corrupt and ſtink like a filthy lake, was it not for its ſaltneſs, which preſerves it pure and ſweet.

Q. How are the ſeas diſtinguiſhed?

A. They are generally diſtinguiſhed by their ſituation. Thus we ſay the South Sea, the North Sea, the Britiſh Sea, and the Iriſh Sea, &c. The general term for a large extenſive ſea, is an ocean; as the Atlantic Ocean, between Europe and America, the Indian Ocean in the Eaſt Indies.

Q. What

Q. What is a ſtrait?

A. A narrow paſſage of water, incloſed by two ſhores, as the Straits of Dover, between the Britiſh Channel and the German ſea, &c.

Q. What is a continent?

A. A large quantity of land, containing whole countries and kingdoms, and that is not ſurrounded by the ſea; ſuch as Europe, Aſia, Africa, and America.

Q. What is a gulph?

A. A gulph is a part of the ſea that runs in between land; if it be very large, it is rather called an inland ſea.

Q. What is an iſthmus?

A. A narrow neck of land between two ſeas, joining a peninſula to the continent; as the Iſthmus of Darien, or Panama, which joins North to South America.

Q. What is a promontory?

A. A promontory is a high land that juts into the ſea: it is often called a cape, as the Cape of Good Hope in the ſouth of Africa.

Q. What

Q. What is an iſland?

A. An iſland is a part of the earth that is ſurrounded by the ſea or other water, as Great Britain, Ireland, Sicily, &c. there are alſo iſlands in rivers.

Q. What is a peninſula, *or almoſt an iſland?*

A. A part of land that is almoſt ſurrounded by the ſea; as the *Morea*, which joins to Greece.

Q. What is a lake?

A. A lake is a large extent of water, incloſed all round with land, that never dries, and that has no current, as the Caſpian Lake in Aſia.

Q. From whence do rivers and brooks derive their ſtores?

A. A river is a ſtream of freſh water, formed from many ſprings, which, running down by the vallies between the ridges of the hills, and coming to unite, form little rivulets or brooks; many of theſe again meeting in one common valley, and arriving at the plain, become a river, the magnitude of which

which is generally in proportion to the greatneſs of the mountain from whence its waters deſcend.

Q. What are fountains or ſprings?

A. Fountains, or ſprings, are thoſe waters that iſſue from the ſides of hills and mountains, where they form natural pools or baſons, which overflowing, the waters deſcend in rivulets, and, as before obſerved, give riſe to rivers.

Q. What is a pond?

A. A quantity of water flowing from a river, or ſome other ſource, and confined by a bank for the preſervation of fiſh.

Q. What is a marſh?

A. A very ſhallow, but ſtagnant water, that is often dried by the heat of the ſun.

LESSON

Turner delin.

Terry sculp. Paternoster Row

LESSON XIV.

Sequel of Geography.

Q. HOW is the whole extent of the land divided?

A. Into an infinite number of countries or ſovereignties.

Q. How many ſorts of governments are there in Europe?

A. Seven; empires, kingdoms, the eccleſiaſtical ſtate, republics, electorates, dukedoms, and principalities.

Q. How many empires are there?

A. Three; the empire of Germany, the Ottoman, or Turkiſh empire, and the empire of Ruſſia.

Q. How was the empire of Germany formerly called?

A. The Roman empire.

Q. Why ſo?

A. Becauſe

A. Becauſe its head is a ſucceſſion of the ancient Roman emperors in the weſtern empires.

Q. Is this empire as conſiderable now as formerly?

A. No; it has been extremely weakened by the many provinces that have been detached from it, and are become ſovereignties themſelves.

Q. What is remarkable of the Ottoman empire?

A. That the greateſt part of it is ſituated in Aſia, and its head is a ſucceſſor of the ancient Roman emperors in the eaſt.

Q. Why is this diſtinction made between the eaſtern and weſtern empires?

A. For this reaſon; when the Romans had conquered almoſt the whole earth, and formed the fourth monarchy, one of their emperors, Theodoſius the great, ordered, that after his death, the empire ſhould be parted between his two ſons, Arcadius and Honorius. The firſt had the eaſtern part of the empire, and continued his reſidence

at

at Conſtantinople. The ſecond had the weſtern part. This event happened about the end of the fourth century.

Q. What have you to remark of the empire of Ruſſia?

A. It is only fifty or ſixty years ago that this country has been erected into an empire, and its princes have been ſucceſſively acknowledged emperors by the other European monarchs.

Q. What title had theſe princes before?

A. They had, and ſtill keep, the name of *Tzar*, or *Czar*, which ſignifies Great Duke, or King.

Q. How many kingdoms are there in Europe?

A. Twelve; Portugal, Spain, France, England, the two Sicilies, Sardinia, Sweden, Denmark, Poland, Pruſſia, Hungary, Bohemia.

Q. What is the eccleſiaſtical ſtate?

A. A part of Italy under the dominion of the Pope.

Q. How many republics are there?

A. Seven; 1ſt, Holland; 2d, Venice; 3d, Genoa; 4th, Lucca; 5th, Raguſa; 6th, Switzerland; and 7th, Geneva.

Q. Are *they* alſo independent ſtates like monarchies?

A. Yes; except Raguſa, which is under the protection of the Turks, and pays tribute to them.

Q. How many electorates are there?

A. Nine; three eccleſiaſtical, the Archbiſhop of Mentz, the Archbiſhop of Treves, and the Archbiſhop of Cologne;—ſix ſecular, the King of Bohemia, the Dukes of Bavaria and Saxony, the Prince Palatinate, the Marquis of Brandenburg, now King of Pruſſia, and the Duke of Brunſwick-Hanover.

Q. Where are they ſituated?

A. All in Germany, except the electorate of Bohemia, which is an independent kingdom.

Q. Are they all ſovereign ſtates?

A. Yes; but held by fief of the emperor and empire.

Q. How

Q. How many dukedoms are there?

A. They are too numerous to be reckoned up here.

Q. How are they divided?

A. Into arch-dukedoms, grand-dukedoms, and dukedoms, properly ſo called;—Auſtria is the only arch-dukedom;—the grand-dukedoms are, Lithuania, united to Poland, and Florence to Tuſcany in Italy.—The principal dukedoms are Lorrain, Courland, Sileſia, Milan, Savoy, Parma, Modena, &c. and in Germany, thoſe of Saxony, Mecklenburg, Holſtein, Wertemburg, &c.

Q. What is a principality?

A. A principality, like a dukedom, is a ſmall ſovereignty.—There are a great many of them, and they are generally dependent on ſome more conſiderable ſtate. In Germany there are two ſorts, one eccleſiaſtical, the other ſecular; the former are arch-biſhops, biſhops, or abbots;—the latter are, maregraves, land-grave or principalities, properly ſo called.

Q. What more is to be remarked of Germany?

A. Two things; 1ſt, that it is divided into circles; and 2d, that there are in it an infinite number of free and imperial towns.

Q. What is a circle?

A. A certain extent of country.

Q. How are they called?

A. 1ſt, Auſtria; 2d, Suabia; 3d, Bavaria; 4th, Franconia; 5th, Upper Saxony; 6th, Lower Saxony; 7th, Weſtphalia; 8th, Lower Rhine; 9th, Upper Rhine; and 10th, Burgundy, now united to the crown of France.

Q. What is a free and imperial town?

A. Free cities are little ſovereign ſtates, but have ſome dependence upon the emperor and empire.—The principal are Nuremberg, Augſbourg, Ratiſbonne, Hamburg, Francfort, Cologne, &c.

Q. What are the capital cities of the three empires?

A. The capital of Germany is *Vienna*; of Turkey, *Conſtantinople*; of Ruſſia, *Peterſburg*.

 Q. What

Q. What are the capital cities of the twelve kingdoms?

A. The capital of the kingdom of Portugal is *Liſbon*; of Spain, *Madrid*; of France, *Paris*; of England, *London*; of the two Sicilies, *Naples*; of Sardinia, *Cagliari*; of Sweden, *Stockholm*; of Denmark, *Copenhagen*; of Poland, *Cracow*; of Pruſſia, *Koningſburg*; of Hungary, *Buda*; and of Bohemia, *Prague*.

Q. What is the capital town of the eccleſiaſtical ſtate?

A. *Rome*, which was formerly the capital of the Roman empire.

Q. What are the capital towns of the ſeven republics?

A. *Amſterdam* is the capital of Holland, and *Zurich* of Switzerland; the others have the ſame name as the republics themſelves.

Q. And the capitals of the electorates?

A. *Mentz* is the capital of the electorate of the ſame name; *Treves*, of the electorate of the ſame name; *Bonn*, of Cologne; *Prague*, of Bohemia; *Munich*, of Bavaria; *Dreſden*,

of Saxony; *Menheim*, of the Palatinate; *Berlin*, of Brandenburg; and *Hanover*, of Brunſwick.

Q. What are the principal rivers in Europe?

A. The *Dwina* and the *Tanais* in Ruſſia; the *Danube*, the *Rhine*, and the *Elbe* in Germany; the *Seine*, the *Rhone*, and the *Garonne* in France; the *Meuſe* in the Low Countries; the *Viſtula* in Poland; the *Thames* in England; the *Tagus*, the *Ebro*, and the *Duro* in Spain and Portugal; and the *Po* in Italy.

Q. What are the chief iſlands of Europe?

A. Great Britain and Ireland in the north; in the Mediterranean ſea are Yvica, Majorca, and Minorca, ſubject to Spain. Corſica was formerly ſubject to Geneva, but became a free ſtate under the brave Paoli, who has ſince been driven out of his territories by the French, who are now maſters of the iſland; Sardinia, ſubject to its own king; and

and Sicily, governed by a viceroy under the king of Naples, to whom the iſland belongs. The iſlands of the Archipelago, with Candia, own the Grand Turk for their maſter; the iſlands of the Baltic, the Adriatic, and Ionian ſeas are not worth your notice.

Q. How is *Aſia* divided?

A. Into the kingdoms of Tartary, China, from whence we have great quantities of china ware and raw ſilk, India, Perſia, Indoſtan, and Turkey in Aſia.

Q. What are the principal iſlands in this quarter?

A. The iſlands in Aſia are the Marian, or Ladrone iſlands, Formoſo and the Phillipines in the Eaſtern Ocean; the Moluccas, and the ſpice iſlands, Celebes, Borneo, Java, Sumatra, Ceylon, the Maldives, &c. in the Indian Ocean; Cyprus, Rhodes, Leſbos, or Metelane, Chios, or Scio, Samos, Coos, and a few others of leſs note on the coaſts of Aſia and in the Mediterranean.

Q. What is this quarter moſt famous for?

A. Its having been the reſidence of our firſt parents, and giving birth to our bleſſed Saviour.

Q. What are the manners of its inhabitants?

A. In general they are groſs, ignorant, and lazy. They love only good cheer and their pleaſures. They are extremely jealous of their wives, and cruel to their ſlaves.

Q. What are the chief kingdoms of Africa?

A. Egypt, Barbary, Morocco, Zaara, or the Great Deſart, Negroland, Ethiopia, and Guinea, where ſhips go yearly to purchaſe ſlaves.

Q. Are the iſlands of Africa conſiderable?

A. Yes; but the following are the principal ones: Madagaſcar the largeſt, called alſo St. Lawrence, the inhabitants black, wild, ſavage, naked, and under no particular governor; the ſmall iſlands of Cape Verd, the Canary iſlands, the Madeiras, noted

noted for excellent wines, the Guinea iſles, and the iſles Aſcenſion and St. Helena, with others of leſſer note in the Ethiopic ſea.

Q. What character have the people?

A. The inhabitants are for the moſt part tawny, and in ſome parts quite black; they have always been groſs idolators, worſhipping the ſtars, fire, and planets; they are accuſed of feeding on human fleſh.

Q. What are the diviſions of North America?

A. The chief kingdoms, ſtates, and colonies in North America are, Old Mexico, or New Spain, New Mexico, or Granada, and Florida, belonging to Spain. New Scotland, New Britain, or Eſquimaux, and Canada, to the Engliſh. New Hampſhire, Maſſachuſet's Bay, Rhode Iſland, Providence, Connecticut, New York, New Jerſey, Penſylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia, compoſe the United States.

Q. What are the iſlands of North America?

A. The iſlands belonging to Great Britain are Newfoundland, Jamaica, St. Chriſtopher's, vulgarly called St. Kitt's, Antigua, Dominica, Barbadoes, the Grenades, Barbuda, Nevis, and Montſerrat, St. Vincent's, and, except Newfoundland, theſe iſlands are diſtinguiſhed by the general name of the Caribbee iſles.

The iſlands belonging to Spain are Cuba, Hiſpaniola, or St. Domingo, part belonging to the French, and part to the Spaniards; Porto-Rico, the Virgin Iſles, Trinidad, and Margaretta. Martinique, Guadaloupe, St. Lucia, and Tobago, belonging to the French.

Q. How is South America divided?

A. Into Terra Firma, Peru belonging to the Spaniards, the country of the Amazones, but little known, the Braſils, belonging to the Portugueſe, Chili, and Patagonia lately diſcovered.

Q. Which are the chief iſlands of South America?

A. Terra del Fuego, of which we have very little knowledge; Chiloe, near the coaſt of

of Chili, on which the Spaniards have a town named Caſtro; Juan Fernandez off the coaſt of Chili, a pleaſant fruitful iſland; the Gallapagos, a cluſter of iſlands lying under the equator off the coaſt of Peru.

Q. What is the general character of the natives of America?

A. They are, generally, of a brown complexion; the few that are white ſtain themſelves of a red, or copper colour, and ſome with ſtreaks of blue.—They are fond of adorning themſelves with ſtrings of beads and ſhells about their necks, and rings in their ears and noſes;—they ſcalp their priſoners, and ſometimes, it is ſaid, broil and eat them.

LESSON XV.

Of Hiſtory.

Q. WHAT is hiſtory?

A. Hiſtory is an account or relation of any thing that has been done.

Q. How is hiſtory divided?

A. Into ſacred and prophane, ancient and modern.

Q. What is ſacred hiſtory?

A. Sacred hiſtory is the hiſtory of the church of God, under the Old and New Teſtament. The Old Teſtament contains the hiſtory of the Jews, or Hebrews, or thoſe who are called the people of God. The New Teſtament contains the hiſtory of Jeſus Chriſt, the Son of God, and his diſciples, who called themſelves after his name, Chriſtians.

Q. What is prophane hiſtory?

A. Prophane hiſtory is the account of the heathen gods, demi-gods, and heroes.

Q. What is ancient hiſtory?

A. Ancient

A. Ancient hiſtory is the account of all the empires, kingdoms, republics, and ſtates, from the creation of the world to the birth of Chriſt.

Q. What is modern hiſtory?

A. An account of thoſe empires, kingdoms, &c. from the birth of Chriſt to the preſent time.

Q. Have not the poets made another diviſion of hiſtory?

A. Yes; they diſtinguiſhed firſt the golden age, which they attributed to Saturn and Rhea, meaning by it the more perfect and happy ſtate of men in the firſt ages of the world.

2*d*, The ſecond is the ſilver age, aſcribed to the reign of Jupiter, and which extended to the time that tyrants appeared among the human race, who, to render themſelves powerful, oppreſſed mankind by violence and injuſtice.

3*d*, The third was the brazen age, which was, when rapacious men, poſſeſſed with the luſt of dominion, endeavoured to reduce their brethren to a ſtate of ſlavery.

4*th*,

4*th*, The fourth age is that of Iron, when all ſorts of crimes began. They pretend it ſtill continues.

Q. What is the earlieſt hiſtory we have?

A. That of the creation of the world, the fall of man, the univerſal deluge, or flood, the preſervation of the human race in the family of Noah, and the re-peopling the ſeveral nations by his three ſons, and their poſterity.

Q. How may we divide ancient hiſtory ſo as to have the cleareſt idea of it?

A. Into the four remarkable periods or æras of the four ſucceſſive monarchies, called univerſal.

Q. Why were they called univerſal?

A. Becauſe each of them extended over the greateſt part of the then known world.

Q. What was the firſt of theſe univerſal monarchies?

A. The *Aſſyrian empire*, founded by Nimrod, the ſon of Cuſh, and grandſon of Ham, in the year of the world 1800; was continued by his ſon Ninus, and after him by his wife Semiramis,

Semiramis, the moſt celebrated heroine of ancient hiſtory, and ended under Sandanapolus in 3250, enduring 1450.

Q. What was the ſecond monarchy?

A. The *Perſian*. It began with their king, Cyrus, in the year of the world 3468, and ended with Darius's being conquered by Alexander the Great in 3670, before Chriſt 330, laſting a little more than 200 years.

Q. By whom was the third monarchy eſtabliſhed?

A. The *Grecian*, which was the third univerſal monarchy, was eſtabliſhed by Alexander the Great, king of Macedonia, in the year of the world 3670, and laſted no longer than his life; for, at his death, as there was no proper ſucceſſor left, his generals divided the empire amongſt them.

Q. Why was Alexander called the Great?

A. Both on account of his natural valour, and alſo the ſucceſs of his arms; for in twelve years he ſubdued all the nations from the Adriatic ſea, to the river Ganges in India.

Q. What

Q. What was the fourth monarchy?

A. The *Roman empire*, founded by Romulus, at laſt aroſe, and became, under Auguſtus Cæſar, miſtreſs of the whole earth, except China, and thoſe countries that were either unknown, or inhabited by ſavage nations, or too inconſiderable to attract regard, and continued, under twelve Cæſars, to the year of Chriſt 96.

Q. Did not the Roman government undergo many changes?

A. Yes; the firſt ſtate of Rome was regal, under twelve kings; the ſecond was a conſulate, under a ſeries of conſuls, for the ſpace of four hundred and ſeventy years. After this the triumvirate was formed between Julius Cæſar, Pompey, and Craſſus; but Cæſar aſpiring to univerſal dominion and ſovereignty, after a long war with Pompey, whom he defeated, gained to himſelf, not only the empire of the Romans, but, in a few years, that of all the known world beſides.

Q. How

Q. How many forms of government are there?

A. Three; the monarchical, the ariſtocratical, and the democratical.

Q. What is the monarchical government?

A. When the ſupreme authority is in the hands of one perſon. If he be a good prince, he is called a king; if a bad and unjuſt one, he is called a tyrant.

Q. Have theſe perſons who have the government in their own hands all the ſame degree of power?

A. No; ſome are deſpotic, that is, act as they pleaſe; are abſolute maſters of the lives and fortunes of their ſubjects, and, in one word, have no other rule for their conduct but their will, while the authority of others are reſtrained by the laws.

Q. Who are theſe deſpotic ſovereigns?

A. The Emperor of the Turks, and in general all the princes of Aſia and Africa. In Europe, the Empreſs of Ruſſia and King of Denmark are deſpotic.

Q. What is the ariſtocratic government?

A. When

A. When the ſovereign authority is lodged in the hands of a few perſons.

Q. In what countries is this kind of government eſtabliſhed?

A. In the republics of the united provinces, Venice, and Genoa.

Q. What is the democratical government?

A. When a number of perſons deputed by a nation exerciſes the ſovereign authority.

Q. What countries are under this form?

A. Many of the Swiſs cantons, and ſeveral of the imperial towns.

Q. Which is the beſt form of government?

A. This queſtion is not yet decided; but this we may venture to ſay, that the monarchical government would be the beſt, were the monarchs always ſuch as they ought to be.

Q. To what form of government do we generally give the preference?

A. To the republican.

Q. Why

Q. Why ſo?

A. Becauſe it agrees beſt with our notions of liberty.

Q. What is the eſtabliſhed government in England?

A. Limited monarchy, hereditary, and females are capable of ſucceſſion. The title of his preſent Majeſty is King of Great Britain, France and Ireland, defender of the faith: and he is head of the church. His foreign titles are Duke of Brunſwick and Lunenburg, Arch-treaſurer of the holy Roman empire, and elector. The heir apparent has the title of Prince of Wales by creation; he is born Prince of Scotland, and Earl of Cheſter and Cornwall.

Q. How was England anciently governed?

A. England was firſt under the *Britons*; 2dly, made tributary to the *Romans* by Julius Cæſar; 3dly, under the *Saxons*; 4thly, under the *Danes*; and 5thly, under the *Normans*, whoſe conqueſt of this iſland, by their baſtard Duke, William, is the grand

grand period from whence our hiſtorians begin to reckon.

Q. Name the ſucceſſion of our Engliſh monarchs from the conqueſt, with the ſeveral families?

A. 1*ſt*, Four Norman kings.—1ſt, William Duke of Normandy; 2d, William Rufus; 3d, Henry I.; 4th, Stephen.

2*dly*, Fourteen kings of the family of Plantagenet, who governed 331 years.—1ſt, Henry II.; 2d, Richard I.; 3d, John; 4th, Henry III.; 5th, Edward I.; 6th, Edward II.; 7th, Edward III.; 8th, Richard II.; 9th, Henry IV.; 10th, Henry V.; 11th, Henry VI.; 12th, Edward IV.; 13th, Edward V.; 14th, Richard III.

3*dly*, Five ſovereigns of the houſe of Tudor, who ſat upon the throne 118 years.—1ſt, Henry VII.; 2d, Henry VIII.; 3d, Edward VI.; 4th, Mary; 5th, Elizabeth.

4*th*, Six monarchs of the houſe of Stuart.—1ſt, James I.; 2d, Charles I.; 3d, Charles II.; 4th, James II.; 5th, Mary II. Queen of William III.; 6th, Anne.

5*th*,

5*th*, One king of Naſſau.—William III.

6*th*, Three kings of the Brunſwic line, which acceded upon the death of Anne.—1ſt, George I.; 2d, George II.; 3d, George III.

Q. What families have ſucceeded to the crown of France?

A. After the declenſion of the Roman empire, the Franks broke in upon the Gauls, and conquered the kingdom: their firſt king was *Pharamond*, A. D. 419: of this family were twenty-one kings; the ſecond race began under *Pepin*, A. D. 751.—This line was followed by the Capetine race, ſo called from Hugh Capet, A. D. 988.—This family was ſucceeded by the houſe of *Valois*, in the perſon of Philip VI. A. D. 1328.—Upon the expiration of this family the ſucceſſion fell on that of Bourbon, A. D. 1589.

Q. What races of kings have ſucceeded to the Spaniſh crown?

A. Since the expulſion of the Romans, Spain has been governed by four families; the firſt from the Goths, the ſecond after the

the invaſion of the Moors of Africa, from *Don Pelago*; the third from *Don Sancho*, king of Navarre, and the fourth from the houſe of Auſtria, by the marriage of *Joanna*, daughter and heireſs of Ferdinand, ſurnamed the *Catholic*, to Philip, arch-duke of Auſtria, eldeſt ſon of the emperor Maximilian, whoſe deſcendants now wear the Spaniſh diadem.

Q. Of what family is the Emperor of Germany?

A. Deſcended from Rudolph I. Count of Halſburg and Landgrave of Alſace, who was the firſt of his family that obtained the empire. He was elected, A. D. 1273.

Q. Of what family is the Emperor of Turkey?

A. Of the Ottoman family, ſo called from the warlike Sultan *Othman*, or *Oſman*, who, A. D. 1300, extended his conqueſts to a prodigious extent.

Q. From what family are the kings of Portugal deſcended?

A. Portugal

A. Portugal became a kingdom about the middle of the twelfth century. Count Henry receiving ſome territories bordering upon it from *Alonzo* King of Leon, as a marriage dowry with his daughter, he expelled the Saracens, and his ſon *Alonzo* conquered Liſbon, and aſſumed the title of King of Portugal in 1146.—In 1580 Philip II. of Spain ſeized upon this country; but in 1640, the Duke of Braganza recovered it, and in his family it has ever ſince remained independent of Spain.

Q. How is Holland governed?

A. By a ſtadtholder, or captain general; which office is hereditary in the Prince of Orange's family.

Q. How is the preſent government of Italy divided?

A. It is divided into little republics, principalites, and dukedoms, which, in ſpiritual matters, are ſubject to the Pope, who, like the ghoſt of the deceaſed Roman empire, ſits crowned upon its grave.

Q. Who

Q. Who is the preſent Pope, and what is his character?

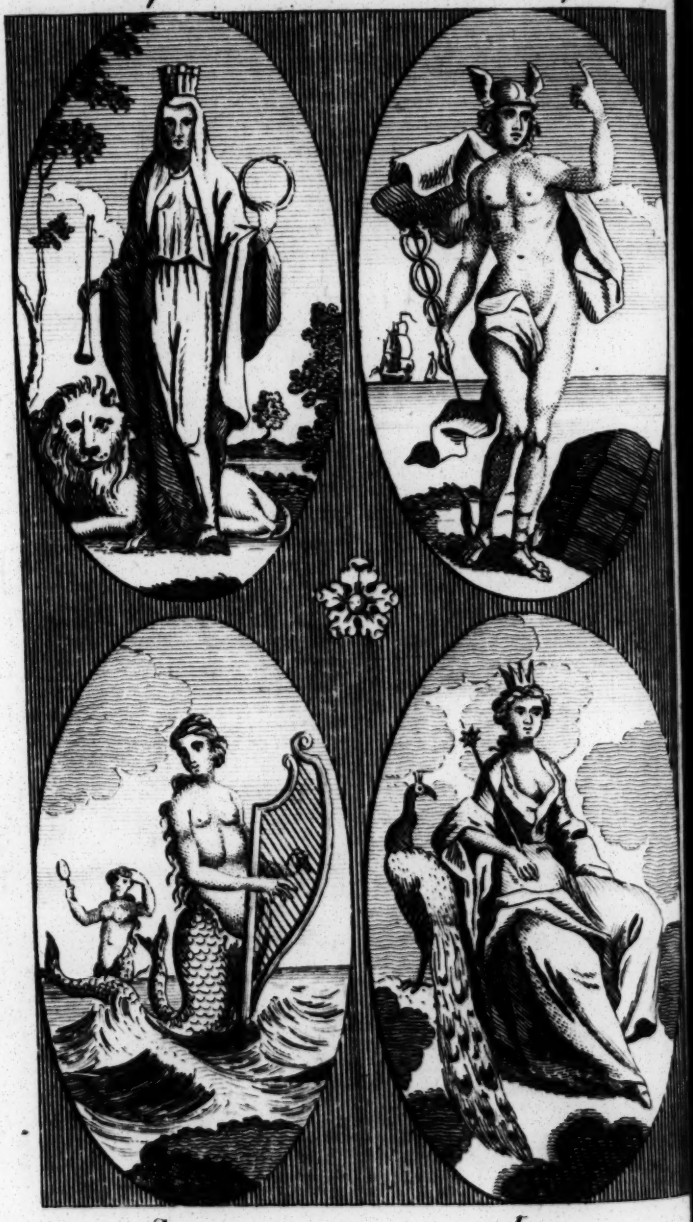
A. Pius VI. John Angelo Braſchi, born Dec. 27, 1717, elected Feb. 15, 1775, elegant in his perſon and manners, but of moderate abilities, and employs his time in all the little frivolous ceremonies and ſuperſtitions, as head of the Romiſh church is his office to perform, and to which he is extremely attached.

LESSON

Plate 2

Cybele

Mercury



Syrens

Juno

LESSON XVI.

Mythology.

"Mythology is the baſis of hiſtory, the ſtandard of criticiſm, and the guide to the ſtudies of youth."

BRYANT.

"*Ne ea quidem quæ ſunt a clarioribus poetis ficta negligere.*"

We muſt not overlook even the fictions of the more illuſtrious poets. —— QUINTILIAN.

Queſt. WHAT is mythology?

A. The religion of the Pagans*.

Q. In

* Men of a phlegmatic diſpoſition, or of a cenſorious temper, never ceaſe to rail againſt the delightful fictions with which Homer and Heſiod, and their poetical imitators, have enriched and embelliſhed their works; but although theſe fictions did not contain

Q. In what did it conſiſt?

A. In the worſhip of falſe gods, whom their poets, painters, and ſtatuaries imagined,

many uſeful inſtructions, and many important truths, would there be any reaſon to attack and deſtroy a ſyſtem which peoples and animates nature, and which makes a ſolemn temple of the vaſt univerſe? Theſe flowers, whoſe varied and ſhining beauty you ſo much admire, are the tears of Aurora. It is the breath of Zephyrus which gently agitates the leaves. The ſoft murmurs of the water are the ſighs of the Naïades. A god impels the wind; a god pours out the rivers; grapes are the gift of Bacchus; Ceres preſides over the harveſt; orchards are the care of Pomona. Does a ſhepherd ſound his reed on the ſummit of a mountain? It is Pan who, with his paſtoral pipe, returns the amorous lay. When the ſportſman's horn rouſes the attentive ear, it is Diana, armed with her bow and quiver, and more nimble than the ſtag that ſhe purſues, who takes the diverſion of the chace. The ſun is a god, who, riding on a car of fire, diffuſes his light through the world; the ſtars are ſo many divinities, who meaſure with

gined, and to whom they gave different attributes.

Q. Who

with their golden beams the regular progreſs of fire: the moon preſides over the ſilence of the night, and conſoles the world for the abſence of her brother. Neptune reigns in the ſeas, ſurrounded by the Neriades, who dance to the joyous ſhells of the Tritons. In the higheſt heaven is ſeated Jupiter, the maſter and father of men and gods. Under his feet roll the thunders, forged by the Cyclops in the caverns of Etna; his ſmile rejoices nature; and his nod ſhakes the foundation of Olympus. Surrounding the throne of their Sovereign, the other divinities quaff the nectar from a cup preſented them by the young and beautiful Hebe. In the middle of the great circle ſhines, with diſtinguiſhed luſtre, the unrivalled beauty of Venus, alone adorned with a ſplendid girdle, in which the graces and ſports for ever play; and in her hand is a ſmiling boy, whoſe power is univerſally acknowledged by heaven and earth. Sweet illuſions of the fancy! pleaſing errors of the mind! what objects of pity, thoſe cold and inſenſible hearts who have never felt your charms! And what objects of indignation thoſe fierce and ſa-

Q. Who was the oldeſt of the gods?

A. Time, called alſo Saturn.

Q. What is ſaid of him?

A. That he devoured his children as ſoon as they were born, becauſe it was in the fates that one of them ſhould uſurp his dominions.

Q. Did not any of his children eſcape?

A. Yes; Jupiter, Neptune, Pluto, Juno, and Ceres.

Q. By what means were they ſaved?

A. His wife, Rhea, pretended to be brought to bed, ſometimes of a ſtone, other times to have miſcarried, &c. &c. and concealed the infant ſhe had been delivered of.

Q. What is meant by Saturn's devouring his children?

vage ſpirits, who would deſtroy a world that has ſo long been the treaſury of the arts; a world imaginary indeed, but delightful, and whoſe ideal pleaſures are ſo well fitted to compenſate for the real troubles and miſery of the world in which we live.

A. Only

A. Only that time deſtroys all things.

Q. How was the ſovereign authority divided between the three ſons of Saturn?

A. Jupiter, as the eldeſt, had the heavens, Neptune the waters, and Pluto the infernal regions.

Q. Who is the meſſenger of the gods?

A. Mercury, ſon of Jupiter and Maia, god of eloquence, and patron of commerce: he had wings on his feet, and a caduceus, or wand, with two ſerpents about it, in his hand; and uſhered ſouls into hell, or the Elyſian fields.

Q. Who was Hebe?

A. The goddeſs of youth, daughter of Jupiter and Juno, and cup-bearer of Jupiter, becauſe ſhe poured out the nectar, the drink of the gods, which they alſo called ambroſia.

Q. Who is Cybele?

A. The wife of Saturn, called Rhea, and mother of all the gods. She was uſually ſuppoſed to preſide over the earth, and has

therefore generally a crown of turrets on her head.

Jupiter.

Q. Who was this god?

A. The pagans called him the father of gods and men; he was the ſon of Saturn and Rhea.

Q. Had he always the name of Jupiter?

A. No; his firſt name was Jovis, from which, by the addition of PATER, was formed *Jupiter*.

Q. How was he brought up?

A. The noiſe made by the muſical inſtruments of the Corybantes, prevented his childiſh cries diſcovering him to his father Saturn, whilſt he was nouriſhed by the goat Amalthea.

Q. Where was he born?

A. Some ſay in Arcadia, others in the iſle of Crete; ſome indeed give that honour to the city of *Thebes* in Bœotia, whilſt

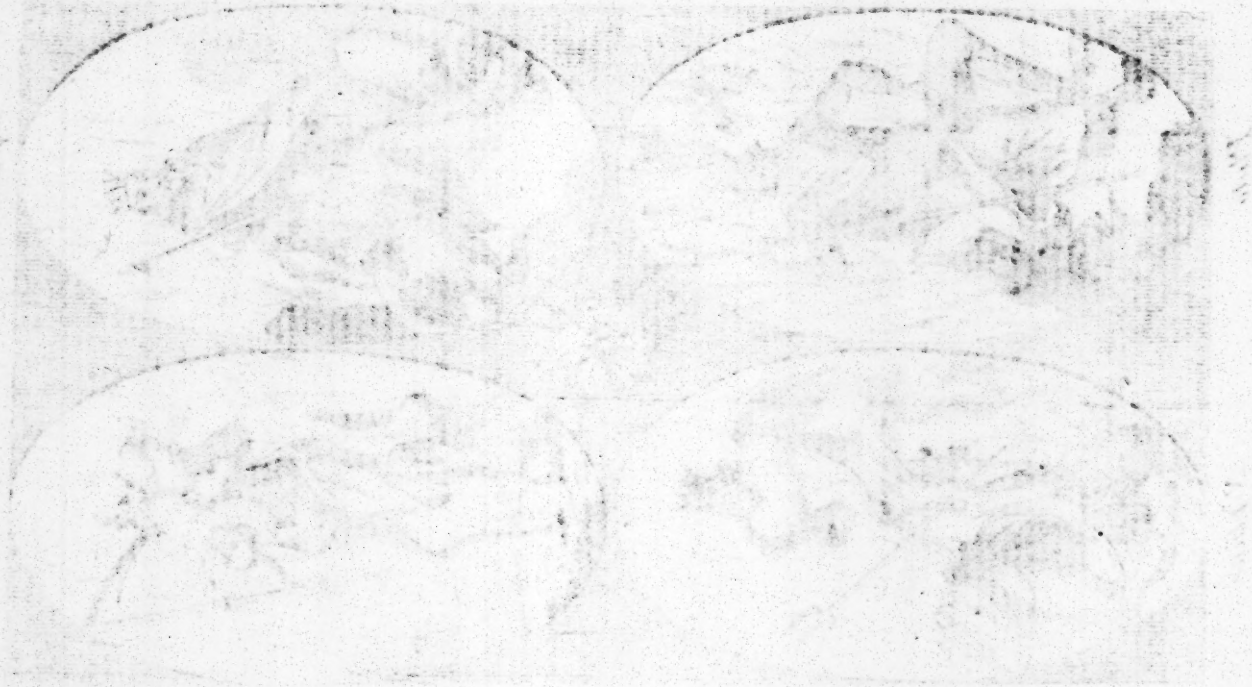
Plate 3

Jupiter

Saturn

Pluto

Neptune



whilſt others fix it at *Meſſenia* in Peloponeſus.

Q. What was his firſt action when grown up?

A. He depoſed and baniſhed his father Saturn, who had attempted to take away his life.

Q. What is recorded of Jupiter?

A. That he erected the world, which before was a chaos.

Q. Who was his wife?

A. Juno, his own ſiſter.

Q. What is ſaid of her?

A. The ancients conſidered her as goddeſs of kingdoms, queen of the gods; and Richneſs, daughter of Saturn and Rhea, ſiſter and wife of Jupiter, who, by the continual jealouſy between them, rendered themſelves a very unhappy couple.

Q. Where was ſhe born?

A. Some ſay at Argos, a town in Greece others at Samos.

Q. Did not Jupiter often transform himſelf to ſucceed in his amours?

A. Yes. He metamorphoſed himſelf into a ſwan for Leda, daughter of Theſtius, and wife of Tyndarus, king of Pebalia; —into a bull, for Europa, daughter of Agenon, king of Phenicia, and ſiſter of Cadmus;—into a ſhower of gold for Danæ, daughter of Acriſius, king of Argos;—and into a ſhepherd for Mnemoſyne, the goddeſs of memory.

Q. Did he always reign in peace?

A. No. His throne was ſhaken by the earth-born giants, called Titans, among whom was one, who, from an hundred hands at once, diſcharged an hundred mountains at the heavens. Jupiter, however, triumphed over them, and eſtabliſhed his reign.

Q. What children had he by his different miſtreſſes.

A. By *Leda* he had *Caſtor* and *Pollux*, brothers of *Helena* and *Clytemneſtra*; they followed Jaſon in his expedition to Colcis for the golden fleece, and conceived ſo great a friendſhip for him that they never left

left him; by *Europa*, *Minos*, and *Rhadamanthus*, who, from their ſeverity in diſpenſing juſtice while on earth, were named judges of hell; by *Danæ*, *Perſeus*, who rendered his name famous: he had alſo a friendſhip for men of letters, and founded a ſchool; and by *Mnemoſyne*, the goddeſs of memory, the *nine muſes*.

Neptune.

Q. What is related of this god?

A. That he had the ſovereignty of the ſeas: he was the ſon of *Saturn* and *Rhea*, and brother of *Jupiter* and *Juno*.

Q. What became of him after his birth?

A. It is ſaid that his mother concealed him as ſoon as he was born from the devouring jaws of Saturn, and ſubſtituted in his place a young foal, of which ſhe pretended to have been brought to bed.

Q. Whom did he marry?

A. *Amphitrite*, daughter of *Oceanus* and *Doris*, mother of the *Neriades*.

Q. What is the ſignification of the word *Neptune?*

A. It ſignifies in Greek *Moſele*, i. e. god of the waters.

Q. Who were his attendants?

A. The *Syrens*, the *Naiades*, and the *Tritons*.

Q. Who were the *Syrens?*

A. They were beings repreſented under the figure of a beautiful virgin, from the head to the middle, and from thence downwards by that of a fiſh, covered with ſcales. They are ſaid to inhabit the ſteep rocks upon the ſea ſhore, where, having allured paſſengers by the ſweetneſs of their muſic, they put them to death.

Q. And the *Naiades*, who were they?

A. They were the ſame as the *Syrens*, half women, and half fiſh, and compoſed the train of *Amphitrite*. They reſided as ſo many domeſtics, in the palaces of the water gods; where they are ſaid to work,

and tell ſtories, and then to come and wait at table.

Q. What ſay you of the *Tritons?*

A. That they made the court of *Neptune.* Half of their body, from their head to their middle, reſembled a man, and the other half had the form of a fiſh.

Q. How are the *Tritons* repreſented?

A. Upon a *dolphin*, with a wreathed trumpet in their mouth, with which they are ſuppoſed to convene all the water deities, when their monarch wanted their aſſiſtance or counſel.

Q. What are the attributes of *Neptune?*

A. He is repreſented ſitting upon a pearl ſhell, drawn by two ſea-horſes, having a trident in his right-hand, uſed by him chiefly to rouze up the waves; but he ſometimes laid it aſide when he was to appeaſe them, though he reſumed it on occaſion.

Q. Where does he reſide?

A. In a palace of cryſtal, at the bottom of the ſea.

Pluto.

Q. Who was god of the infernal regions?

A. Pluto, ſon of *Saturn* and *Rhea*, to whom *Jupiter*, after deſtroying his father, gave the infernal regions as his part of the empire. This god was ſo extremely black and ugly, that he could not find any woman inclined to partake his throne, which determined him to carry away *Proſerpine*, daughter of *Ceres*, whilſt ſhe amuſed herſelf with her nymphs in gathering flowers. He is repreſented upon a chariot drawn by four black horſes.

Q. What are his attributes?

A. A ſceptre, or battoon of two points, to diſtinguiſh it from Neptune's trident, which had three, and a crown of iron on his head.

Q. Who are the judges of the dead in the infernal regions?

A. Minos, *Eacus*, and *Rhadamanthus*.

Q. Who was the porter of hell?

A. It was guarded by a vaſt three headed dog, called *Cerberus*, whoſe body was covered with ſnakes inſtead of hair. He was born of the giant *Typhon* and *Echidna*.—He is ſaid to have given a kind reception to thoſe unhappy ſouls who deſcended into hell, but devoured thoſe who attempted to eſcape.

Q. What are the principal rivers in theſe dark realms?

A. 1. *Acheron*, whoſe waters are extremely bitter. 2. *Styx*, by which the gods were uſed to ſwear. 3. *Cocytus*, flowing out of *Styx*, with an horrible groaning noiſe, and encreaſes with the tears of the wicked. 4. *Phlegethon*, ſwelling with waves of fire. Over theſe four rivers, the ſouls were ferried by Charon, to Tartarus, or Hades, the heathen hell.

Q. Deſcribe to me Tartarus.

A. TARTARUS, or the REGION OF TORMENTS, is an hideous priſon of a terrible

terrible depth, ſurrounded with the miry bogs of Cocytus, and the river Phlegethon, which rolls torrents of flames all around; three rows of walls with brazen gates, render the place inacceſſible. Here the wicked ſuffer a puniſhment proportioned to their crimes*.

Q. Where

* The moſt impious of the condemned in hell are the REBEL GIANTS, who, after their defeat by Jupiter, were caſt down to Tartarus, to receive the puniſhment due to their enormous crimes. The poets, in ſpeaking of theſe monſters, ſay, they had ſnakes inſtead of legs. TANTALUS is repreſented as hanging over the waters, which are always flowing through his hand, and gliding from him: to this eternal torment of hunger and thirſt he was condemned; for having invited the gods to a feaſt, when, to prove their divinity, he killed, boiled, and ſerved up the joints of his ſon Pelops on the table before them to eat. SISYPHUS, a notorious robber, is condemned to roll a vaſt ſtone up to the top of a hill, which ever ſlides down again, and makes his labour perpetual. IXION, condemned for impiety and ingratitude,

Q. Where did they ſuppoſe the ſouls of the virtuous were conveyed after their death?

A. Into Paradiſe, which they called the ELYSIAN FIELDS, or the REGIONS of BLISS. It conſiſted of pleaſant plains, verdant fields, ſhady groves, purling ſtreams, and a moſt ſerene and temperate air.—After the happy ſouls had long enjoyed this Elyſium, they drank of the river Lethe, which made them forget all thoſe pleaſures, and then returned to the earth again, and poſſeſſed new bodies, in order to fill up the courſe of the probation in our world.

Q. What other deities do we meet with in the infernal regions?

A. Old *Erebus* and his wife *Nox*, who preſide over darkneſs and night. Alſo *Mors* over death, and *Somnus* over ſleep, who,

ingratitude, in attempting to violate the chaſtity of Juno, is fixed to a wheel, which hurries him round in one perpetual whirl.

by

by his ſervant *Morpheus*, ſends dreams to us above while ſleeping. The attendants upon *Somnus* are Reſt, Eaſe, Indolence, Silence, and Oblivion.

LESSON

Plate 4 *Bellona.* *Mars.*

Ceres. *Minerva.*

LESSON XVII.

Sequel of Mythology.

" A Knowledge of feigned Hiſtory, or Mythology,
" is abſolutely neceſſary to the Reader of the
" Claſſics," &c. KNOX.

Q. WHO is *Mars?*

A. Mars was the ſon of *Jupiter* and *Juno*; he was the god of armies and war, and is repreſented armed cap-a-pee, with a cock at his feet, becauſe he metamorphoſed into a cock his favourite *Alectron*, who keeping watch whilſt he was with Venus, ſuffered him to be ſurpriſed.

Q. Who was the goddeſs of war?

A. Bellona, ſiſter to *Mars*, who generally conducts his car armed with a whip and diſhevelled hair.

Q. Who is the goddeſs of wiſdom and the ſciences?

A. Minerva

A. Minerva, or *Pallas*. She is repreſented completely armed, with an owl at her feet, becauſe that bird ſees in the dark, and intimates that true wiſdom never ſleeps.

Q. Who is the goddeſs of agriculture?

A. Ceres, daughter of *Saturn* and *Cybele*; who taught men the art of cultivating the land and ſowing ſeeds; for which reaſon ſhe has been honoured as the goddeſs of agriculture; ſhe is painted as a beauty of the brunette kind, with ears of corn in her hands.

Q. Who is *Morpheus?*

A. God of ſleep.

Q. Who is *Momus?*

A. The god of folly. He is repreſented with a maſk and groteſque face;—he was rather a jeſter, mocker, or mimic of the gods, than a god himſelf.

Q. Why was he thus repreſented?

A. Becauſe he was always employed in examining the actions of gods and men, and reprehending them with freedom.

Q. Who

Plate 5

Momus.

Morpheus.

Escalapius.

Harpocrate.

Q. Who is the god of ſilence?

A. Harpocrates, ſon of *Oſiris* and *Iſis*.—He is always painted with a finger on his mouth.

Q. Who is the inventor of medicine?

A. Eſculapius, ſon of *Apollo*, and the nymph *Coronis*.—He is generally repreſented under the figure of a ſerpent.

Q. By whom was he brought up?

A. By the centaur Chiron, from whom he learned phyſic.

Q. By whom was he killed?

A. By Jupiter.

Q. For what reaſon?

A. Becauſe Pluto complained that his empire over the dead was much diminiſhed by the art of Eſculapius.

Q. Where was he adored?

A. At Epidaurus, a town in Peloponeſus.

Q. What goddeſs preſides over gardens and flowers?

A. Flora; Pomona, and her lover Vertumnus, over orchards and fruit-trees.

Q. Who

Q. Who are the principal rural deities, or gods of the woods?

A. The Satyrs, and Fauns, who ranged over the country, but delighted chiefly in vineyards; *Priapus*, an obſcene deity, whoſe buſineſs was to drive away birds, and guard the fruit from thieves; and *Ariſtæus* and *Terminus*, who was nothing but a bound ſtone. Beſides a great variety of nymphs; as the Dryades, Archades, &c. &c.

Q. Who was *Venus?*

A. She was the handſomeſt of all the goddeſſes, who, ſoon after ſhe was born, the Hours carried with pomp into heaven, where the gods found her ſo extremely beautiful, that they were deſirous of marrying her, and named her the goddeſs of love; her principal temples were at *Citherea*, an iſle in the Archipelago; *Paphos*, a town in Cyprus, and *Amatontia*, another town in the ſame iſland.

Q. From what is ſhe ſaid to be produced?

A. From

Plate 6

Vulcan.

Venus.

Apollo.

Bolus.

A. From the froth of the ſea.

Q. Had ſhe any children?

A. Yes. She is the mother of *Cupid*, the god of love, whom they generally repreſent as a child of ſeven or eight years old, always naked, handſome, inclining to plumpneſs, and ſometimes a little idle and ſly. His quiver, bow, and darts, are continually mentioned to this day.

Q. Who are the attendants of *Venus?*

A. The three *graces*; their names are *Aglaia*, *Thalia*, and *Euphroſine*. They are repreſented, generally, naked, like three beautiful ſiſters, and connected together.

Q. Whoſe wife was Venus?

A. She was the wife of Vulcan, god of blackſmiths, ſon of Jupiter and Juno; as he was extremely ugly and deformed, as ſoon as he was born, Jupiter kicked him out of heaven. In the fall he broke his leg, of which he always remained lame. He is repreſented with a fiery red face whilſt at work with the Cyclops. This

poor

poor god is always the ſubject of pity or ridicule. He is the grand cuckold of heaven, and his lameneſs ſerves to divert the gods.

Q. What was the figure of the Cyclops?

A. They had vaſt bodies, were extremely ugly, and had only one eye in the middle of their forehead.

Q. What is ſaid of Vulcan?

A. That he was recalled to heaven, through the interceſſion of Bacchus, and re-eſtabliſhed in the favour of Jupiter.

Q. With whom did he marry?

A. Jupiter cauſed him to marry Venus, whoſe infidelities to her huſband have been ſtrongly marked out from the earlieſt ages. The poets, in particular, have never ſpared her; and often ſpeak of the public ſhame ſhe was brought to by her amours with Mars.

Q. Who was Æolus?

A. The God of the wind, tempeſts, and hurricanes.——Aquilo and Boreas are the cold winds of the north;—Eurus, or the genius of the eaſt winds, preſided over all the

the eaſtern quarter of the heavens;—— Zephyrus, or the weſt end, preſided over the weſt, and is the mildeſt of all the wind deities;—and Auſter, or Notus, the genius of the ſouth wind, was the chief director of the ſouth. Theſe wind deities were all brothers, ſons of Aſtræus, the eldeſt brother of Saturn, by Aurora.

Of Parnaſſus.

Q. What is Mount *Parnaſſus?*

A. The habitation of the nine *muſes*, daughters of *Jupiter*, and the goddeſs *Mnemoſyne*, and where *Apollo* preſides.

Q. Who is *Apollo?*

A. Apollo was ſon of *Jupiter* and *Latona*. He is the god of poetry and muſic, and in that character is repreſented with a lyre in his hand, and a crown of laurels on his head. He is alſo god of the ſun, and thence is generally called *Phœbus*.

Q. Where was he born?

A. At

A. At *Delos*, an iſland in the Ægean ſea.

Q. What is the river that flows at the foot of Mount *Parnaſſus?*

A. Hippocrene, a fountain of Mount *Helicon*, in *Bœotia.*

Q. How is it ſaid to have been formed?

A. The poetic horſe, *Pegaſus*, ſo often mentioned by the poets, gave a kick againſt the mount, and the river *Hippocrene* immediately ſprung out.

Q. What are the names of the muſes?

A. Calliope, Clio, Erato, Thalia, Melpomene, Terpſichore, Euterpe, Polyhymnia, Urania.

Q. Over what particular ſcience does each muſe preſide?

A. Calliope is the goddeſs of heroic poetry; *Clio*, of hiſtory; *Erato*, of amorous poetry; *Thalia*, of comedy; *Melpomene*, of tragedy; *Terpſichore*, of dance; *Polyhymnia*, of the ode; *Euterpe*, of muſic and inſtruments; and *Urania*, of aſtronomy.

Q. How

Q. How are they repreſented by the Poets?

A. As very young, very handſome, and adorned with garlands of flowers.

Of the Demi-gods, or Heroes.

Q. What do we underſtand by an hero?

A. A title given by the Greeks to thoſe who had made themſelves famous.

Q. What is a demi-god?

A. A man born of a god, or goddeſs, by a mortal: there are infinite numbers of them.

Q. Who are the principal?

A. Æneas, Ulyſſes, Hercules, Theſeus, Achilles, and Jaſon.

Q. What is remarkable in the hiſtory of Æneas?

A. He was a Trojan Prince, ſon of Anchiſes and the goddeſs Venus; he is memorable for his grateful care of his aged father, whom he bore through the flames of Troy upon his ſhoulders, at the hazard of his life and his ſon's, a child, who was

obliged to cling to his garments to eſcape them. Arriving in Italy, he married Lavinia, the daughter of Latinus, king of the Latins, and built Lavinium, ſo named after his wife. He died 1197 before Chriſt.

Q. What is recorded of Ulyſſes?

A. That on his return by ſea from the Trojan war to the iſland of Ithaca, of which he was king, the Syrens uſed every effort to ſtop him; but that he might not be ſurpriſed by the melodious voice, he ſtopped his ears, and cauſed himſelf to be tied to the maſt of the ſhip.

Q. What are we told of his wife Penelope?

A. Beſieged by a numerous train of lovers in the abſence of her huſband, ſhe delivered herſelf by artifice. She promiſed to make choice of one of them, as ſoon as a piece of tapeſtry, on which ſhe was at work, ſhould be finiſhed; but every night ſhe unwove all ſhe had done the preceding day.

Q. Who was Hercules?

A. Son of Jupiter and Alcmene, wife of Amphytrion. He was expoſed through the whole courſe of his life to perform the moſt dangerous adventures, by the malignity of Juno, and the fatality of his birth. His principal exploits are termed, by way of eminence, the twelve labours of Hercules.

Q. Explain them.

A. 1. Whilſt a child in his cradle, he ſtrangled two ſerpents which Juno had ſent to deſtroy him.

2. He killed in the foreſt of Lerna, a frightful Hydra of fifty heads: when he cut off one of theſe heads, another immediately ſprung up in its place.

3. He catched and killed on mount Menalus an extremely ſwift hind, with horns of gold.

4. He overcame Diomedes, king of Thrace, who fed his horſes with the fleſh of his gueſts, and threw him to be eaten by his own horſes.

5. He took on the mountain Erimanthus, in Arcadia, a wild boar, that had made dreadful havock round that country, and dragged it alive to Euriſtheus.

6. He tamed a furious bull that laid deſolate Crete.

7. He conquered upon the banks of Tarſeſus, by the invincible force of his arm, a giant of immenſe ſtature with three bodies, and carried away his flock.

8. He ſeparated the mountains Calpis and Abila, which were before joined.

9. He carried away the golden apples from the gardens of the Heſperides, after he had killed the dragon that watched them.

10. He ſuffocated, in wreſtling, the giant Antheus.

11. To eaſe Atlas he took the heavens upon his ſhoulders.

12. And laſt he is repreſented covered with the ſkin of a lyon of an amazing ſize, which he had conquered in the woods of Nemæa.

Q. How did the life of this famous hero end?

A. Having ſlain the centaur Neſſus, the dying monſter gave Dejanira (Hercules's wife) a garment dipt in his own blood,

as

as a preſervative for love.—This Dejanira ſoon after ſent him to regain his affections. The hero had no ſooner put on the poiſoned ſhirt, than he was ſeized with violent and incurable pains; therefore, making a funeral pile on mount Oëta, he ſet fire to it, and cloſed, with the moſt dreadful agonies, a life of hardſhips for the good of his fellow-creatures.

Q. What is meant by the Heſperides?

A. They were the daughters of Heſperius, ſon of Japet, and brother of Atlas.

Q. What is ſaid of Atlas?

A. He was the ſon of Uranus, a great obſerver of the ſtars, and the firſt who repreſented the world by a ſphere.

Q. What is related of Theſeus?

A. He was the ſon of Ægeus, king of Athens, and Æthra, daughter of the wiſe Pitheus, at whoſe court he was brought up by Trœzenus; he killed the Minotaur?

Q. What was this Minotaur?

A. He was a monſter which had a bull's head, and all its lower parts human. It

was incloſed in the Labyrinth at Crete, made by Dædalus, by the order of Minos, king of that iſle, the inhabitants of which ſacrificed men to Jupiter and Saturn; and where many of the gods and goddeſſes were born.

Q. Who was Perſeus?

A. Son of Jupiter and Danæ, daughter of Acriſius, king of Argos. He was king of the Mycenians. He had the wings of Mercury, the ſhield of Minerva, the helmet of Pluto, and a ſword forged by Vulcan. Thus armed, he overcame and cut off the head of Meduſa. He alſo delivered Andromeda, daughter of Cepheus, king of Ethiopia, from a monſter, and afterwards married her. He lived about 1348 years before Chriſt.

Q. What is ſaid by the poets of the head of Meduſa?

A. That it was ſurrounded by ſerpents inſtead of hair, and turned to ſtones thoſe who had the raſhneſs to look upon it.

Q. What is remarkable in the hiſtory of Achilles?

A. He

A. He was the ſon of the goddeſs Thetis, daughter of Nereus and Doris, the moſt beautiful of the Nereides; and Peleus, ſon of the famous Eacus, king of Egina, and the nymph Endeis, daughter of Chyron: he was educated by the centaur Chiron. His mother dipped him in the Styx, all but the heel, by which ſhe held him, to make him invulnerable. He was ſlain at the ſiege of Troy by Paris, whoſe arrows ſhot him in the heel, 1180 before Chriſt.

Q. What is a centaur?

A. A monſter, half man and half horſe.

Q. Who was Jaſon?

A. Son of Eſon and Alcimede. Upon the death of his father, he was placed under the tuition of Pelias.

Q. What is his ſtory?

A. At the perſuaſion of Pelias, he undertook the Argonauti expedition to Chelcoe for the golden fleece, which he carried away about 937 years before Chriſt.

Q. What golden fleece was that?

A. The hide or fleece of a ram, called golden,

golden, becauſe it was of a golden colour. It was guarded by bulls that breathed fire from their noſtrils; and by a vaſt and watchful dragon in the grove of Mars.

Q. Who was Pelias?

A. Son of Neptune and Tyro.

Q. How was he brought up?

A. He was fed by a mare, and became the moſt cruel of all men.

Q. What did he when grown up?

A. He not only uſurped the eſtates of Jaſon, but cauſed him to be impriſoned.

Q. What elſe is recorded of him?

A. He ſacrificed his mother-in-law to Juno, and put to death the wife and children of Eſon; but Jaſon was ſaved from his fury, and educated in private.

Q. Who was Paris, and what was his judgment?

A. Paris was the ſon of Priam, king of Troy, and Hecube. At the wedding of Thetis and Peleus, when Juno, Venus, and Minerva were preſent, the goddeſs Diſcord threw into the aſſembly a golden apple, with this

this inſcription, To the faireſt. Each of theſe three goddeſſes wanted to have the apple, and each ſaid ſhe was the faireſt. At length they agreed to be judged by Paris, at that time feeding his flock upon mount Ida, who decided in favour of Venus. He is memorable in hiſtory for carrying off Helena, wife of Menelaus, king of Mycena, in his abſence, which occaſioned the famous ſiege of Troy, when he was ſlain by Pyrrhus 1188 before Chriſt.

Q. Who was Pyrrhus?

A. Son of Achilles king of Theſſaly, and Deidamia, daughter of Lycomedia.

Q. What were the actions of this prince?

A. He was ſignalized for his cruelty.

Q. Mention ſome of them.

A. He ſacrificed Polyxena, daughter of Priam and Hecube, upon the tomb of Achilles.

2. He maſſacred Priam at the foot of the altar.

3. He carried Andromache with Aſtianax into Epirus.

Q. Who

Q. Who was Andromache?

A. Daughter of Ætion, king of Thebes, wife of Hector, and mother of Aſtianax.

Q. What more did he?

A. Arrived in Epirus. He is ſaid to have thrown Aſtianax off a high tower, and to have married Andromache.

Q. How did he die?

A. Hermione his wife, daughter of Menelaus and Helena, prevailed upon Areſtes, ſon of Agamemnon and Clytimneſtra, with the promiſe of marriage, to aſſaſſinate him.

Q. Where did he accompliſh this crime?

A. In the temple, at the celebration of a ceremony.

FINIS.

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